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Critical Incident Stress and the Effectiveness of Debriefing for Hospital Personnel

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by

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CERTIFICATE OF APPROVAL

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DEDICATION

To my family who supported me in innumerable ways: my parents who gave me an uninterrupted, quiet, creative retreat as well as encouragement; my children, Benjamin, Ashley, and Mitchell, for their patience when school work had to be done; and my husband, Ben, who toiled through the entire process offering technical expertise and unfailing emotional support.

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ABSTRACT

Critical Incident Stress and the Effectiveness
of Debriefing for Hospital Personnel

Exploratory Survey Research of Hospital Based Critical Incident Stress

Brenda S. Verbick
June 30, 1999

A model of intervention called Critical Incident Stress Debriefing (CISD) has been developed for the hospital setting to mitigate the impact of a critical incident and to assist workers in recovering as quickly as possible from the stress associated with the event.

This quantitative cross-sectional survey expands the knowledge of the impact of critical incidents on hospital workers and the effectiveness of the CISD model of intervention in reducing stress reactions. Through a self-administered survey, participants were asked to complete a subjective stress measurement tool, the revised Impact of Event Scale (IES-R), as well as a 'helpfulness' questionnaire developed to obtain participants' perceptions of the effectiveness of the CISD model in reducing stress symptoms.

The study revealed hospital staff involved in critical incidents experience both intrusion and avoidance symptoms following incidents. In addition, CISD intervention appears to be an effective mediator for hospital staff coping with critical incident stress. Implications for social work practice and policy are discussed.

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CHAPTER 1: INTRODUCTION

An employee working on a hospital mental health unit turns from a patient to whom she has just given medication and is attacked from behind without warning. She is unable to reach an emergency alert button in her pocket. By the time co-workers respond to her screams, she has suffered significant injury requiring a medical leave from work. Unit staff verbalize fear of themselves becoming a victim, guilt and distress at feeling somehow they should have been able to provide quicker aid to their co-worker, and anger at the patient as well as hospital management who "never provide enough safety".

A small toddler, dressed only in diapers, is brought to the emergency room after wandering onto a busy roadway and being hit by a car. The child dies shortly after arrival and no one knows where the child's parents or caretakers are. The child is a John or Jane Doe helped on the scene by passers-by. Hospital staff express sadness and anger that a child died needlessly and so alone.

Motor vehicle accident victims are on their way to the trauma room within the hospital's emergency department. The critical care response team has arrived and is ready to provide emergency treatment to the victims. To their horror, two of the victims are one of the hospital's physicians and his wife. They are unable to save the physician and are caught between shock and grief at the unexpected loss of one of their own.

Problem Statement

These are only a few examples of some of the scenarios that occur in hospitals every day. Staff are trained and expected to provide care for every type of injury in a coordinated response to hundreds of patients. They see and experience an unlimited array

of pain, trauma, and acute, chronic and life threatening illnesses. At times hospital staff themselves are the direct victims of a physical assault or injury related to their job responsibilities. Occupational stress among hospital staff, by virtue of the intensity of the patient care and its emotional demands, is very high. Situations like the ones described above add dimensions of unpredictability, powerlessness, and perceptions of lack of control that threaten to be emotionally overwhelming. A state of emotional crisis or trauma can occur and can lead to decreased ability to function optimally, staff burn-out, or post-traumatic stress disorder (Aguilera, 1990; Lanza, 1996; Lewis, 1993; Spitzer, 1993).

When sudden or unexpected traumatic events occur outside the range of ordinary professional experiences of health care workers (critical incidents), hospital staff may experience emotional crisis or trauma. Hospital organizations have traditionally responded to staff with educationally focused stress management programs or individual employee crisis counseling through employee assistance programs (EAPs). Those programs may be from within their organizations (such as hospital social work departments) or from formal EAP companies. Recently, a group debriefing model of crisis intervention, Critical Incident Stress Debriefing (CISD), has been introduced in hospitals to address staff stress resulting from critical incidents. This group process model appears to use a unique combination of crisis intervention and educational approaches which involve less financial and human resources than does an individual counseling approach. In addition, it uses the support within a team of workers who experienced a critical incident to help mitigate the stress experienced by those on the team.

Study Objective and Impact on Social Work

The purpose of this study is to explore the impact of critical incidents in the hospital setting and the benefits of the CISD model of intervention. Although the study will rely on subjective reporting of the stress impact of critical incidents and effectiveness of debriefings, the significance of participants' perceptions is important. Employees who feel CISD sessions are beneficial and experience reductions in their stress symptoms will seek additional CISD services in the future. Hospital leadership and support personnel will be able to anticipate and identify events that would benefit from CISD interventions, thereby providing a more comprehensive and consistent approach to staff stress.

Social workers provide services to hospitalized patients in the form of advocacy, discharge planning, resource management, community resource referrals, crisis intervention and brief counseling. Some hospitals involve social workers in employee assistance services, but many of those services are now provided by formal Employee Assistance Programs. Although a few formal staff support programs are provided by social workers, informal support is frequently extended to hospital staff seeking information and referral for themselves or family and friends.

Social workers have broad skills that are not often utilized in the current hospital environment requiring accelerated discharge planning and leaving little time for other services. Yet, social workers who have contact with virtually every area of the hospital are in a unique role as mental health professionals to see the impact of traumatic or critical incident stress and to provide basic crisis intervention services. Becoming familiar with the CISD process provides a framework to respond to traumatic events and to advocate for the mental health of the staff with whom we work.

In today's environment calling for health care reform and fiscal efficiency, health care cost is scrutinized by administration and program managers. The impact of critical incidents and the effectiveness of CISD intervention has not been measured and therefore CISD programs may be under utilized and supported. Study opportunities include examining gender differences in stress reactions of hospital workers, possible differences in critical incident characteristics in emergency rooms, intensive care units, and other medical units impacting traumatic stress levels, and descriptions of the coping strategies used by hospital workers. This study will use the Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979) to measure the psychological distress experienced by hospital staff involved in a critical incident and will survey respondents for their perceptions of the effectiveness of critical incident stress debriefing.

Research Questions

Specifically then, this study will ask: 1) What is the stress impact of critical incidents on health care personnel in the hospital setting? 2) Do hospital staff who have participated in a CISD session perceive the CISD model as helpful in decreasing stress symptoms?

Summary

Hospitals have lacked a consistent, comprehensive approach to responding to traumatic or critical incident stress experienced by well-trained staff. The CISD model proposes a consistent response and combines education and crisis intervention in a more comprehensive approach to reducing levels of staff stress. The recent application of CISD to hospital settings has been absent from studies examining the actual impact of

critical incidents on staff and the subjective effectiveness of the CISD intervention. This study proposes to address both issues.

Following this introductory chapter, chapter two will address the literature on stress theory with specific attention to the roles of cognitive appraisal and disclosure in the coping process. The third chapter examines the CISD model in detail, Chapter four will describe the details of the methodology of the research project. Chapter five presents the collected data and findings. Lastly, chapter six expands on the findings as they relate to past literature and research, presents strengths and weaknesses of the study, discusses implications for social work practice in the hospital setting and suggests future research opportunities.

CHAPTER 2: THEORETICAL FRAMEWORK

In this chapter, a theoretical framework will be provided with which to look at the concept of stress and a model of the stress process. Coping as an internal mediator of the stress process, and the roles of cognitive appraisal and disclosure in the coping process following a stressful event or critical incident, will be examined. Because this research project will examine events that, by their traumatic nature, can be emotionally overwhelming to hospital staff, the psychological effects of crisis and traumatic stress will be discussed.

Stress Theory

Throughout western history the concept of stress has undergone an evolution, moving from an identified external event to an understanding of it as an internal process. As early as the 14th century, stress as an external event was a term which meant a hardship or adversity. Science in the late 19th century saw a shift toward medicine with a generalized acknowledgment of stress as an external cause of ill health. Theorists in the early 20th century identified the measurable effect of stress on physiological changes within the body such as cardiovascular adaptation and the release of hormones (Lazarus & Folkman, 1984). Hans Selye, a prominent expert in stress theory, further identified stress as an internal process, defining it as "the non-specific (that is common) result of any demand on the body, be it mental or somatic demand for survival and the accomplishment of our aims" (Selye, 1980, preface p. 7). Although there are differences in the way stress is defined and percieved, three broad approaches from which stress has historically been defined are described by Lazarus and Folkman (1984): 1) a stimulus approach 2) a responsive approach and 3) a relational approach. These three approaches

parallel the move from identifying stress as an external event or stimulus to an internal response and finally to an internal process.

Stress as a Normative Expectancy

A stimulus approach to stress focuses on events in the environment (such as disasters, injuries, or death of a loved one) which are normatively defined as stressful by a group or society and would be more commonly agreed upon as stressors (in italics). Much of our learning occurs in a social context through vicarious or second hand experience. Although we have not experienced the personal violation of a robbery in our home for instance, we certainly observe the impact it has on a neighbor or loved one. Dohrenwend and Dohrenwend (1980) hypothesize in their normative conceptualization of stress that "the impact of such a life event in an individual will be determined by a learned normative expectancy concerning the stressfulness of that event" (p. 11). For example, a person facing the uncertainty of a company reorganization may experience significantly more stress if he/she has learned from family or friends to expect a negative outcome than a person who has learned to expect opportunities. Our perception of what is stressful is a learned, normative understanding. In a hypothetical stimulus model, stress would be identified as an independent variable; a condition of the environment, either physical or psychosocial, that has an effect on a dependent variable (Fisher, 1986). This approach to defining stress may explain why the same critical incident is identified as stressful by staff in a hospital intensive care unit, but not by staff in an emergency room. For instance, the unexpected death of an accident victim may have a stronger impact on intensive care staff than on emergency room staff who experience the death of accident victims more frequently and therefore have some degree of expectation of such

experiences. It does not, however, explain why each individual within the intensive care unit may experience that incident, and its impact, differently. If the perception of stress was exclusively a learned, normative understanding then all staff experiencing the same situation would be impacted in the same way.

Stress as a Response

Responsive definitions, prevalent in medicine to explain the body's physiological changes when a person experiences a stimulus, refer to a state of stress experienced by a person. For instance, in the early 1950s Harold G. Wolff emphasized stress as a dynamic state involving adaptation to demands (cited in Lazarus and Folkman, 1984). Selye (1980) explained stress as a physiological response pattern, a non-specific response of the body to any demand. A responsive definition of stress asserts that a state of stress is present when a physiological response can be observed or measured. An event is defined as stressful, not by group norms, but by the physiological response to the event.

Dohrenwend and Dohrenwend (1980) also describe a conceptualization of stress as a response, but differ from Lazarus and Folkman, Wolff, and Selye in that the response is described in psychological, rather than physiological terms. Their ideographic conceptualizaton presumes stress is defined by the meaning an event has for an individual after he/she has experienced it. Such a definition relies on the meaning of the event to the particular individual who experiences it rather than relying on group norms or measured physiological changes as the basis for assessing the importance of that event. An ideographic definition then allows for variations in how stressful a critical incident is perceived by different hospital staff in the same unit. In a hypothetical response model,

stress, whether physiological or psychological, would be identified as a dependent variable, one that is affected by an independent variable (Fisher, 1986).

Stress as a Relationship

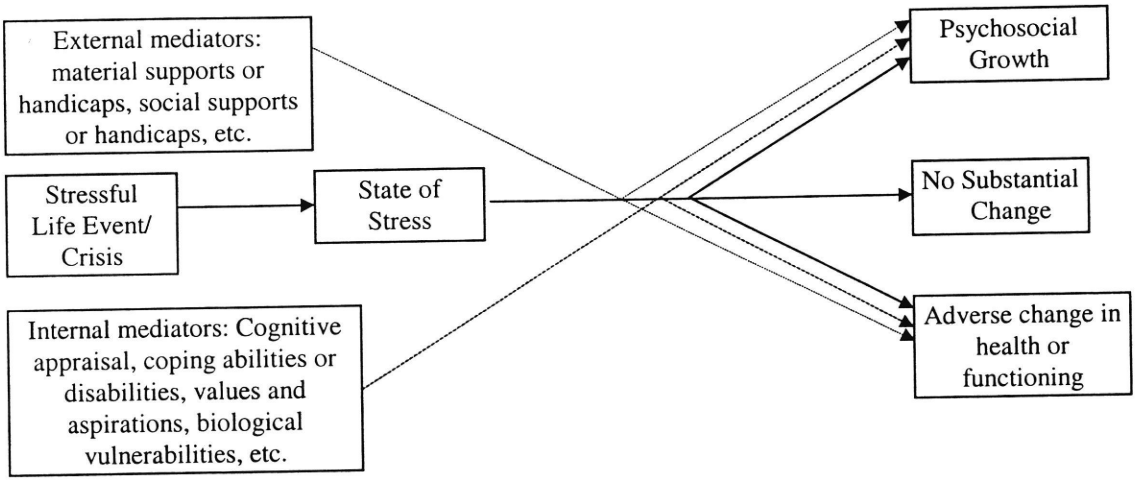
A relational definition (Fisher, 1986; Lazarus, Conen, Folkman, Kanner, & Schaeter, 1980; Lazarus and Folkman, 1984) emphasizes the relationship between the person and the environment and takes into account individual characteristics of both during an interaction. Stress is not seen as either a single independent or dependent variable, but rather as a process consisting of many variables. Stress is defined as "a particular relationship between the person and environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus, 1984, p. 19). A relational definition supports an ideographic view of stressful events within a process model. It allows for both normative expectations and individual meaning to play a role in the perception of the event.

Psychosocial Model of Life Stress Process

When the focus on the effects of stress shifted from a physiological measurement to a psychosocial concept with relational factors, a psychosocial model of stress process developed that supports a transactional definition of stress (Dohrenwend & Dohrenwend, 1980). The model begins with a percieved stressful life event that introduces a state of stress. The impact on a person experiencing a stressful event is influenced by internal and external mediators (See figure 2.1). Mediators are aspects of a situation that play a role in determining how a person reacts to, and ultimately copes with, a stressful event. These mediators impact three possible outcomes of experiencing a stressful life event:

(1) psychosocial growth, (2) resuming life without significant change, or (3) experiencing adverse or negative changes on his/her health or functioning.

Figure 2.1: Model of Life Stress Process



From "What is a stressful life event?" by B. Dohrenwend and B. Dohrenwend, 1980. In H. Selye (Ed), Seyle's Guide to Stress Research, Vol. 1, p. 2.

The model supports the concept that experiencing stress and coming to a resolution of that experience is a process. The process is influenced by the nature of the event itself, mediated by internal and external factors. Internal mediators are those strengths or weaknesses we possess, whether physical or psychological. External mediators are environmental supports that are available or lacking during a stressful event. Family who provide monetary or emotional support, an employer who grants or denies a work leave, etc. are examples of external mediators. How we cope with adversity, our positive or negative coping behaviors, are internal mediators.

The CISD model, as an external mediator, is an environmental support available to hospital staff who are coping with a critical incident. The intent of the model is to encourage positive coping behaviors (internal mediators) of participants to assist in resolution of the stress experienced during and after a critical incident. The structure and phases of the CISD process, through participants' telling of their stories, provides opportunity to think about the event in more helpful ways. To better understand the intended benefit of CISD, the concept of coping as an internal mediator and the roles of disclosure and cognitive appraisal in coping will be examined, followed by concepts of crisis and traumatic stress.

Internal Mediator: Coping

Coping is defined as the person's constantly changing cognitive and behavioral efforts to manage the demands and emotions generated by that which is appraised as stressful (Lazarus & Folkman, 1984). It is the process of attempting to resolve the emotional disequilibrium or imbalance that can be associated with a stressful life event. One perspective of coping presented by Taylor (1983) describes three processes which are integral to resolving the experience of a traumatic event: a search for meaning, an attempt to regain mastery, and an effort to restore self-esteem. McCammon, Durham, Allison, and Williamson (1988) follow a parallel perspective and outline three domains of coping that affect traumatic stress events: problem-focused coping, emotion-focused coping, and appraisal-focused coping.

Problem-focused coping includes practical aspects of seeking information or support or initiating problem-solving actions. It is an active approach to re-establishing control of one's environment and regaining a sense of mastery. With a sense of control

the emotional reaction to the crisis may lessen allowing an individual to pursue the work of finding meaning and closure to a traumatic experience.

Emotion-focused coping involves releasing emotion and regulating or regaining emotional balance. Post traumatic stress disorders appear to be related to the separation of traumatic emotional experience and language (Pennebaker, 1997). Writing or talking about a traumatic experience, including associated emotions, can achieve some degree of structure and organization to a person's thoughts. Linking powerful emotions into language can alter the way it is understood in our minds.

Appraisal-focused coping involves interpreting the subjective meaning of an event. Traumatic events involve an interruption in the life or tasks of a person experiencing the event. Similar to Taylor's search for meaning process, causal understanding and meaning appear to be a key factor in bringing closure to an event so it can be assimilated into a person's life experience.

Phases in CISD move participants through all three coping domains, providing opportunity to use emotion-focused, appraisal-focused, and problem-focused coping. The strength of the model can be seen in a closer examination of disclosure and cognitive appraisal theory.

Disclosure

Disclosure can be examined as a behavioral effort to cope with that event. James Pennebaker (1997) has done extensive work around the effects of disclosure (talking or writing about thoughts and feelings associated with a traumatic event) and inhibition (to consciously hold back, restrain or exert effort not to think, feel, or talk about an event) on the health and psychological well-being of those who experience a trauma in their lives.

Some of Pennebaker's studies have shown that disclosing trauma results in lower skin conductance (a measure of perspiration on the skin, showing a physiological stress response) and higher blood pressure and heart rate (a measure of emotional response) during the disclosure. After disclosing, however, blood pressure and heart rate responses were lower than before the disclosure (1997). Persons who inhibited their emotions and thoughts had high skin conductance measures and higher blood pressure and heart rates during and after the experiment, suggesting greater physiological demand on the body. Over time the work of inhibition serves as a cumulative stressor on the body, increasing the likelihood of illness and other stress-related physical and psychological problems (Pennebaker, 1997). Research findings with college students and corporate employees found that persons who had not disclosed personal traumas that they experienced recently or in childhood were more likely to be diagnosed with cancer, high blood pressure, ulcers and other major and minor health problems than those persons who confided about the event (Berry & Pennebaker, 1993).

Another study involving college students who wrote about personal traumatic experiences and were able to construct a story of that experience using expressions of negative emotions found that student immune systems (measured through blood samples) were enhanced for up to six weeks after the experiment and visits to health centers decreased in the six months following the experiments (Pennebaker, 1993; Pennebaker & Beall, 1986). Pennebaker, Barger, and Tiebut (1989) designed a study that would attempt to learn if the act of disclosing personal experiences surrounding the Holocaust would have positive effects on long term health. What they found was that low disclosure individuals evidenced increased skin conductance levels (denoting the physiological work

of inhibiting or holding back) while talking about particularly traumatic Holocaust experiences. Low disclosure individuals were more likely to visit physicians for subsequent health problems whereas high disclosure individuals had less visits in the year following the interview. An interesting phenomenon in that study found that low disclosures who experienced no physical benefit from their interview found it more psychologically helpful than high disclosures, demonstrating the psychological benefit of even limited disclosure.

Besides examining physical health as a benefit of disclosure, psychological benefits occur as well. By talking or writing about an event we translate the event into language which can lead to understanding and assimilation of the event. In surveys sent out to participants of Pennebaker's writing study with college students asking them to describe the long term effects of the writing experience, 80% described the value of the study in terms of insight and understanding themselves better (Pennebaker, 1997).

In contrast, inhibiting traumatic experiences will likely result in ruminations, dreams, and intrusive thoughts. Intrusive thoughts usually occur when people try to suppress naturally occurring images that pop into their minds. These unwanted thoughts begin to surface soon after a person experiences a trauma or when images are triggered by a sight, smell, or sound that reminds them of a trauma experienced earlier in their lives. Talking can, in itself, lead to articulation of thoughts and emotions so that the person has a better understanding and control over his/her coping processes (Robinson & Mitchell, 1993).

Making an unacceptable thought acceptable, or normalizing a reaction that seems abnormal, is the first step to healthy thinking and accelerated coping. The CISD process

provides a safe, structured environment in which participants can disclose their thoughts and emotions associated with a critical incident. Through the work of disclosing, participants may begin to think about, and react to, an event differently.

Cognitive Appraisal

One mediating factor in how a person might react to, and ultimately cope with, a traumatic event is their appraisal of the event itself. In the study of traumatic stress, van der Kolk and McFarlane (1996) agree that "the critical element that makes an event traumatic is the subjective assessment by victims of how threatened and helpless they feel" (p.6). Horowitz and Kaltreider (1995) describe the work of the human mind as using existing schema from past experience to interpret new stimuli and adapt to a novel experience. Schemas are the cognitive structures or memory representations that contain our experiences and learning (Beebe et al., 1995). They organize concepts into clusters and networks of related knowledge. Schemas allow information to be understood and processed in an ongoing effort to form meaning. When an unpredictable event is severely stressful or traumatic, it may be incompatible with existing schema which may not be easily applied to the experience. Existing concepts and knowledge gained from past experiences and repeatedly drawn upon to make sense of new experiences are unable to guide cognitive interpretations and response. This inability to form meaning may generate psychological discomfort or disequilibrium to the degree that a person is unable to perform routine tasks. The new information needs to be integrated into the existing schema for psychological equilibrium to be restored. It is that restoration which the human mind undertakes in the resolution of the experience. Susan Folkman and Richard Lazarus have written extensively on the mediating role of cognitive appraisal in

psychological stress (Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen, 1986; Lazarus et al., 1980; Lazarus & Folkman, 1984). It is not just the stimulus itself, then, that determines a person's response but how one evaluates the stimulus and the emotion it arouses.

Cognitive appraisal then is a "process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well-being, and if so, in what ways" (Folkman et al., 1986, p. 992). Appraisal is separated into primary appraisal (the person evaluates if he or she has anything at stake in the encounter) and secondary appraisal (the person evaluates what can be done to prevent or overcome harm). Aguilera (1990) discusses the importance that subjective meaning of a stressful event plays in determining both the nature and degree of a person's coping behaviors. Although the reality of traumatic events are at the core of the stress process, the meaning that victims attach to the events is as fundamental as the trauma itself (van der Kolk & McFarlane, 1996). Take for example a female victim of rape who, having survived the rape experience, places meaning on the physical and emotional violation (primary appraisal) and regains mastery as she establishes what she can do now to prevent further experiences and overcome present reaction (secondary appraisal). A few months later she becomes aware that the perpetrator has been arrested in another case where he not only raped the victim, but murdered her as well. Her primary appraisal of the event has drastically changed (she now perceives her very life to have been in grave danger) and she may perceive that she has less control over assuring her safety. Her new meaning to the event may elicit a much stronger stress response.

A study of cognitive appraisal (Folkman et al., 1986) examined the relationship between cognitive appraisal, coping processes, and satisfaction outcomes. Coping was measured on eight scales: 1) confrontive coping (aggressive efforts to alter the situation with a degree of hostility and risk-taking); 2) distancing (efforts to detach oneself); 3) self-control (efforts to regulate ones own feelings or actions); 4) seeking social support (seeking informational, emotional or tangible support); 5) accepting responsibility (acknowledging one's own role and trying to put things right); 6) escape-avoidance (wishful thinking and behavioral efforts to escape or avoid); 7) planful problem-solving (deliberate problem focused effort to alter the situation); and 8) positive reappraisal (efforts to create positive meaning by focusing on personal growth). They found that how a person perceives a stressful encounter has an influence on the type of coping used. Subjects accepted more responsibility and used more confrontive coping, planful problem-solving, and positive reappraisal in situations they perceived as changeable and used more distancing and escape avoidance coping in those they did not. Satisfaction with the outcome of the coping processes was characterized by higher levels of problem-solving and positive reappraisal. Perception of control was an important predictor of coping style and an underlying theme in the use of positive reappraisal and problem-solving to achieve mastery and closure after the event.

McCammon et al. (1988) conducted a study of cognitive appraisal and coping with traumatic events involving emergency workers. Through the use of a disaster experience questionnaire and a coping inventory, McCammon et al. identified as the basic coping process the cognitive search for meaning in the traumatic event. The greatest threat to successful coping after a disaster appeared to be failure to find a cognitive

framework to integrate the disaster. Active behavioral attempts to master reactions and emotions experienced after the disaster also emerged as an essential component of the coping process. Seeking emotional support from others, talking about the incident, and focusing on shared aspects were found to be integral to the coping response by individuals. "Mastery of the emotions by normalizing them through identifications with others having similar experiences should not be underestimated in the coping process" (McCammon et al., p. 369).

What seems congruent throughout the literature is the interactive process between a person and the environment in resolving stress. Coping and the roles of cognitive appraisal and disclosure to mediate a traumatic experience and restore a state of equilibrium were examined. Disclosure and cognitive reappraisal are important concepts on which the critical incident stress debriefing model is built. Before examining that model, the concepts of crisis and traumatic stress, the psychological impact of traumatic events, and the characteristics of critical incidents will be defined.

Concepts of Crisis and Traumatic Stress

A crisis has been defined as an upset in a steady state, a loss of equilibrium, and a state of acute emotional upset that includes a temporary inability to cope by means of one's usual problem-solving capacities (Van den Bergh, 1992). Jeffrey Mitchell describes crisis as an interruption from a previously normal state of functioning resulting in turmoil, instability, and significant upheaval in a system (Lewis, 1993). George Caplan, as cited in Aguilera (1990), defines a crisis as occurring when a person faces an obstacle that is, for a time, insurmountable through a person's usual method of problem solving and a period of upset or disorganization develops. He describes two types of

crisis: developmental or normative crisis and situational crisis or accidental happenings. For purposes of this review, situational crisis or accidental happenings will be the focus of discussion.

From a psychological perspective, the term trauma is often interchanged with the term crisis. Van den Bergh (1992) considers trauma to be emotional shocks caused by severe stress or frustration precipitated by an external event or environmental stimulus that can occur at any time. An especially impactful situational crisis or accidental happening is also referred to as a traumatic event. Jeffrey Mitchell (1983) calls such impactful or traumatic events critical incidents. Psychological trauma or crisis appears to have similar themes: (1) a precipitating event of great impact that (2) produces a stressful reaction with which an individual has difficulty coping (3) resulting in a state of upset or disequilibrium.

Psychological Effects of Traumatic Events

In recent years there has been much work around the psychological effects of traumatic events on personnel who are exposed to them as part of their occupational roles. Feeling a loss or lack of control during and after a traumatic event is common (White,1998) and can involve mental traumatization (Shalev, 1996). It has been acknowledged that emergency workers as well as the victims they help can experience traumatic stress from disaster or emergency situations. Mitchell (1983) identified stress resulting from critical events that cause emergency service personnel to experience strong emotional reactions which could interfere with their ability to function during the event or later as critical incident stress (CIS). Some of the groups studied for CIS include Red Cross disaster workers (Armstrong, O'Callahan, & Marmar, 1991) firefighters and

emergency medical workers (Jenkins, 1996; Mitchell, 1983; Paton & Violanti, 1996), and emergency road accident volunteers (Werner, Bates, Bell, Murdoch, & Robinson, 1992).

An exploratory study aimed at specifying aspects of situations that lead to CIS during and after a critical incident was conducted with volunteer emergency workers who had assisted at road accidents in Australia (Werner et al., 1992). Six prominent characteristics or aspects of situations that lead to critical incidents were reflected in three themes: 1) knowing or identifying with the victim or their family (children involved or association with the victim or family); 2) large scale events (multiple deaths or enormity); and 3) surprise or novelty (being unprepared or first experience with death). In a separate study, characteristics of events that are identified as critical incidents included: a line of duty death; 6-10 multiple casualties; multiple situations; a child fatality; and unusual situations (Robinson & Mitchell, 1993). Findings from both studies support Mitchell and Bray's (1990) description of characteristics that are more likely to be perceived as traumatic: a) multiple casualty accidents or disasters; b) the death of a child; c) victims who are known to emergency personnel; d) events that threaten the lives of responders.

The same emergency worker study by Werner et al.(1992) found stress reactions to be higher in persons reporting a high impact from the incident, and found stress reactions to be more prevalent after the critical incident than during it. Participants reported that keeping active and switching off (ignoring or suppressing their stress response) helped to maintain functioning during a critical incident but that discussion or a debriefing was more helpful after a critical incident. The investigators again found congruence with previous studies on coping and stress reactions.

Another study (Marmar, Weiss, Metzler, & Delucchi, 1996) investigated the relationship between dissociation (elements of a traumatic incident are stored in memory as isolated fragments instead of an integrated whole) during a critical incident and the risk for post traumatic stress disorder (PTSD). In this study, the perception of threat to self during a critical incident had direct influence on peritraumatic dissociation, as did age (those reporting symptoms of dissociation were younger) and level of exposure to CIS. Those reporting peritraumatic dissociation also had higher scores in escape-avoidance and self-control and lower scores on problem-solving. After a traumatic event most people suffer from intrusive thoughts about what happened (van der Kolk & McFarlane,1996). Workers who used cognitive avoidance were able to maintain functioning during the critical incident, but without discussion after the incident they experienced physiological responses and significant re-experiencing of the event. Discussion aids the cognitive process in integrating and accepting a traumatic memory as part of one's past. This supports the cognitive model of coping examined by Werner et al. (1992).

To a lesser degree and more recently, hospital workers have become identified as an occupational group which is at high risk for prolonged or unresolved stress reactions. Trauma events enter our hospitals and pose direct and indirect threats to those working in the admitting areas, emergency rooms, and intensive care units. Increasing violence in our society brings traumatized victims of domestic and child abuse, gang related violence, and shootings in our schools and on our streets to be treated in major trauma centers, community hospitals, and even rural care centers. Doctors, nurses, social workers, and other health care personnel find themselves targets of violent threats from patients or

visitors (Lanza, 1996). Hospitals have out of necessity developed "lock down" procedures whereby high risk areas can be locked to prevent any entry or exit from the unit to protect patients and hospital personnel.

Hospital workers can be primary victims of trauma when they themselves are assaulted. They may experience compassion stress resulting from knowing about a traumatizing event or wanting to help a trauma victim. Compassion stress can lead to secondary traumatization or vicarious traumatization when the trauma transforms the health care worker's own inner experience (White, 1998). Often the emotional crisis is at its highest in the hospital where the first notification and arrival of those significant to the victim occurs. Those whose traumatic experience exceeds their capacity to cope with the trauma are at risk for developing post traumatic stress disorder (PTSD).

The criteria for PTSD include exposure to a stressor beyond the range of human experience with subsequent symptoms of intrusive re-experiencing, avoidance, and hyperarousal (Southwick, Krystal, Johnson, & Charnery, 1992). Treatment of PTSD includes individual treatment and/or group therapy with the goal of teaching victims symptom management strategies while helping them to readjust after traumatic events. Ochberg (1991) found it helpful to group various methods of treatment into four categories: education, holistic health, social support and social integration, and clinical therapy which includes victims telling their stories. The importance of early intervention, or crisis intervention, to prevent PTSD is well known. A method of crisis intervention that incorporates many of these elements into a group setting to reduce anxiety, explore alternate coping methods, provide social and emotional support, and

ultimately prevent PTSD falls under a comprehensive critical incident stress management program and is called critical incident stress debriefing (CISD).

Summary

This chapter presented a theoretical framework to look at the life stress process in general, and traumatic or critical incident stress in particular. The role of coping, specifically the roles of cognitive appraisal and disclosure, were examined. Concepts of crisis and traumatic stress and their psychological effects on disaster and emergency workers was discussed. Chapter three will examine the CISD model in more detail.

CHAPTER 3: LITERATURE REVIEW

In this chapter, Critical Incident Stress Management (CISM) as an overall response to critical incident stress will be briefly explained followed by a more detailed examination of the CISD model of intervention within CISM. The influence of cognitive appraisal and emotional disclosure can be seen in the theoretical framework of the model. Two studies measuring CISD effectiveness with emergency response personnel, and three studies involving CISD in hospital settings, will be presented.

Critical Incident Stress Management

Critical Incident Stress Management is an internationally recognized program that represents an integrative, comprehensive approach to the prevention and mitigation of critical incident (traumatic) stress (Everly & Mitchell, 1997). The goals of CISM programs are to reduce the incidence, duration, severity, or impairment from traumatic stress arising from crisis situations and to facilitate follow-up mental health interventions when necessary. Components of a CISM program include: 1) pre-crisis education and preparedness training; 2) on-scene services called demobilizations (process to decompress rescue personnel at mass disasters and transition from the disaster site to home or work); 3) diffusing (short group discussions at the crisis scene to reduce acute stress and tensions levels); 4) individual crisis support; 5) family support programs; 6) referral mechanisms; 7) critical incident stress debriefing (longer group discussions of a crisis or traumatic event with the goal to mitigate the adverse psychological impact of a traumatic event by reducing the intensity and chronicity of post-trauma symptoms as well as to facilitate psychological closure of the event).

Critical Incident Stress Debriefing

CISD has been defined as a form of crisis intervention (Wollman, 1993). Crisis intervention is a type of emotional "first aid" designed to assist a person in a crisis to return to a pre-crisis steady state or psychological homeostasis (Everly & Mitchell, 1997). As a psychosocial model of intervention, CISD is designed to decrease the psychological stress that can result from experiencing a traumatic event. In the last decade and a half, CISD has gained support in emergency medical responder arenas and has foundations in military experiences, police psychology, emergency medical services and disasters (Mitchell, 1988; Rubin, 1990).

Studies concerning the human response to trauma had their origins in observation of military personnels' responses to combat. Timely treatment of soldiers in World War I allowed 65% of those affected by trauma to return to their duties compared to 40% of those who received delayed treatment (Van Den Bergh, 1992). Similar findings resulted from studies of World War II, but the strongest interest in post traumatic stress has been generated from the delayed symptoms of Vietnam veterans. Other work that has added to the validity that early intervention mitigates prolonged or delayed traumatic stress responses can be traced to police and emergency medical personnel involved in major natural disasters (Armstrong et al., 1991; Jenkins, 1996). Only recently has CISD been introduced to organizations in response to workplace violence and to high risk occupations such as hospital workers.

The objectives of both crisis intervention and the CISD model include: 1) assisting crisis victims to gain cognitive understanding of the relationship between the crisis and the resulting disequilibrium; 2) reducing immediate anxiety through ventilation

of feelings (disclosure); 3) exploring alternate ways of coping or drawing on successful techniques from the past that are not currently being used; 4) encouraging emotional support from family, friends, or peers. One significant difference between CISD groups and other crisis groups is that CISD membership is homogenous, based on a particular crisis incident instead of membership of unrelated participants who share the same type of crisis. Crisis groups are generally applied to a broad range of crises such as mental health relapse, marital discord, substance abuse, etc. CISD groups have a narrower, more acute range of crises that include critical incidents or catastrophic life events.

Two empirical studies that attempt to measure the effect of CISD on emergency response personnel include a study of hurricane victims in Kauai and a study of rescue workers in Texas following an F5 tornado. The first study established preliminary empirical support for the effectiveness of postdisaster psychological intervention by using the Impact of Event Scale (Chemtob, Tomas, Law, & Cremniter, 1997). Two groups of Kauai residents exposed to Hurricane Iniki were debriefed at different times with a pretreatment measurement and a post treatment measurement 90 days later. To control for the decrease in distress due to the passage of time, the second group received its first treatment 90 days after the first group, coinciding with the post treatment measure of the first group. The Impact of Events Scale scores were reduced in both groups after the treatment indicating an overall reduction in stress symptoms experienced by participants after a debriefing.

The second study was a follow-up study with rescue workers from an emergency medical services agency and a law enforcement agency who had responded to the destruction left by an F5 tornado in Texas in May, 1997 (Glenn, 1998). A confidential

questionnaire asked emergency personnel to recall the event and asked a series of questions on the effectiveness of debriefings with regard to symptom reduction and recovery. Respondents were asked to choose a time frame in which they experienced symptom reduction and recovery. A second portion of the study acted as the control variable and asked respondents to recall a prior event in their career which they perceived to have as much of an impact on them as did the tornado but for which they did not receive a debriefing. The same series of questions were asked around that recalled event. Both the perceived symptom reduction times and perceived recovery times were less after the tornado event when debriefing interventions were offered.

The CISD Model

The main objectives of CISD are to mitigate the impact of a critical incident and accelerate the return of personnel to routine functions after the incident. CISD (Mitchell,1988) was developed for emergency medical services personnel and is a structured group experience with a psychoeducational component that describes commonly encountered post traumatic stress symptoms and provides support to normalize victim reactions. Participants are taught that they are normal people experiencing normal reactions to abnormal events. Debriefings offer the opportunity to process the event, integrate it, and promote effective coping. Most importantly, the goal of CISD is to bring or facilitate psychological closure to a traumatic event.

By definition, critical incidents involving three or more people are eligible for debriefing. If an event creates a severe stress or trauma reaction in one or two people, individual attention is provided to them outside the formal CISD process. Groups are typically held 48-72 hours after a critical incident and are facilitated by a trained team

comprised of mental health professionals and specially trained peer support personnel from the emergency services ranks. Groups are closed, in that only participants directly involved in the critical incident or traumatic event are allowed to participate, and last usually one to three hours. The intent of the group process is to provide participants with an orchestrated sequence of events that allows them to tell their story, receive support from their peers, facilitate integration of the event into their work environment, and receive education on stress symptoms and holistic ways to manage those symptoms through exercise, diet, meditation, etc.

The group sequence, outlined in Table 3.1, has seven distinct phases: introduction, fact, thought, reaction, symptom, teaching, and reentry. Objectives of each phase are clearly outlined for CISD facilitators to follow, moving participants from the cognitive domain to an affective domain and back to cognitive. The process assists appraisal-focused coping by providing an opportunity for participants to think about an event in different ways through hearing others' thoughts and recollections in a safe, guided group. Emotion-focused coping is encouraged when participants are asked to share feelings and reactions to the event, allowing cathartic ventilation or disclosure. In addition, problem-focused coping is supported through the symptom and teaching phases during which symptoms are identified and stress management techniques are taught.

CISD Applications to Hospital Workers

The use of CISD has expanded beyond firefighters, police, emergency medical personnel and other "first responders" to hospitals and the health care workers who provide critical care and emergency services to trauma victims. Programs vary in their

Table 3.1: The Critical Incident Stress Debriefing Process

CISD Phases	CISD Objectives	Domain
Introduction	To introduce team members, explain the process and set ground rules	Cognitive
Fact	To allow participants to describe the traumatic event in his/her own perspective	Cognitive
Thought	To allow participants to describe their cognitive reactions to the event and to begin transition to the affective domain	Cognitive to Affective
Reaction	To identify the most traumatic aspect of the event and to allow for cathartic ventilation	Affective
Symptom	To identify any symptoms of distress or psychological discord and to facilitate the initial transition back to the cognitive domain	Affective to Cognitive
Teaching	To normalize and demedicalize the crisis reactions of participants and to teach basic personal stress management and coping strategies	Cognitive
Re-Entry	To provide closure to the CISD process and psychological closure to the traumatic event	Cognitive

Note. From Critical Incident Stress Management: A New Era and Standard of Care in Crisis Intervention, (pp. 54-55), by G. S. Everly and J. T. Mitchell, 1997, Ellicott City, MD: Chevron Publishing Corporation. Copyright 1997 by Chevron Publishing Corporation. Adapted with permission.

scope with some debriefing teams focusing on incidents that involve patient death (Lane, 1994) and others adopting a broader focus to include cumulative stress associated with several deaths or multiple traumas over a short time period (Spitzer & Burke, 1993). CISD services were provided by hospital based teams in both programs.

Little literature exists directly pertinent to acute hospital settings and references found in the literature were descriptions of current practice. One empirical study was qualitative in nature; debriefing sessions were observed and interviews conducted with participants who had been directly involved in the care of patients who died despite all efforts (Lane, 1994). Suggestions by the investigator of that study include: 1) a full-time debriefer position for the emergency room; 2) sessions for families of health care workers; 3) administration should attend debriefings to better understand the needs of health care workers; 4) facilitating more timely debriefings to avoid debriefings after 72 hours; and 5) educating all hospital staff on the CISD model and its conceptual basis.

A second study by Robinson and Mitchell (1993) was qualitative and described the impact of critical incidents and psychological debriefings on emergency service personnel (eighteen debriefings) and hospital/welfare workers (eleven debriefings). Hospital/welfare workers rated the impact of the traumatic incidents higher than did emergency services workers. In addition, hospital/welfare workers reported that the incident was having a greater impact on them at the time an evaluation questionnaire was completed two weeks after a debriefing. Of interest is the gender differences between the emergency personnel (predominantly men, who reported a lower impact) and the hospital/welfare personnel (predominantly women, who reported a higher impact). It is

difficult to determine if impact ratings differed because of occupation, gender or the actual characteristics of the events.

A third study by Burns and Harm (1993) combined quantitative and qualitative research to determine what clinical events were perceived by emergency nurses as "critical" and to evaluate the effectiveness of the debriefing process. Questionnaire responses from 682 members of three state Emergency Nursing Associations and supporting interview data from 26 of those participants provided information for the study. Events that the study found to be most frequently listed as stressful were the death of a child followed by the death of a co-worker in the line of duty. Although the study had not included violence in the list of possible critical events, a significant number of respondents had listed violent threats to staff as stressful, critical events. Debriefings were attended by 32% of the survey population and of those, 88% found debriefings to be helpful, suggesting that debriefing is appropriate for emergency room nurses. The study did not attempt to measure the stress impact nor did it include non-nursing personnel in its study population.

Opportunities exist to expand the application of CISD to critical incidents in hospitals beyond those that are patient death related. For example, the CISM program, including CISD services, has been adapted for use in a program called the Assaulted Staff Action Program (ASAP) that responds to staff assault incidents (Flannery, 1998). In addition, the often ignored effects of cumulative stress become difficult for health care workers, who are expected because of technological advances to save even the most severely injured or critically ill patients or face threats of litigation, to manage on a daily basis. Robinson and Mitchell (1993) found that responding to several difficult situations

over a short period of time created a stress response in more people than did a single incident involving up to five fatalities or the death of a child.

Another example is a variation of the CISD model called solution focused debriefing (SFD) groups proposed by Juhnke & Osborne (1997). Similarities between CISD and SFD groups include: 1) both are situation specific; 2) both allow only the people who experienced or witnessed the same violent episode to participate; 3) both educate victims about normal trauma reactions. SFD groups differ from CISD in that SFD groups meet once a week for three weeks; typically CISD is a single group meeting. The first SFD group follows the seven steps of CISD, however, the subsequent two groups focus on: 1) participant reports of positive signs of recovery; 2) exploring additional coping strategies; and 3) identifying common elements of symptom-free times. Through the group's collective power to promote change, participants regain a sense of control, reinforce positive changes, and anticipate closure to the critical event and associated symptoms.

Summary

This chapter presented the CISD model of intervention within the overall framework of CISM as a response to critical incident stress. Theories of cognitive re-appraisal and emotional disclosure are reflected in the framework and are integral to the phases of the model. Application within the hospital setting, including empirical studies, was presented.

The next chapter will outline the research methodology used to answer the research questions: 1) What is the stress impact of critical incidents on health care

personnel in the hospital setting? 2) Do hospital staff who have participated in a CISD session perceive the CISD model as helpful in decreasing their stress symptoms?

CHAPTER 4: METHODS

This chapter presents the research design and methodology. Key concepts and variables explored in the study are defined, the research design and sampling procedures and presented, the measurement tool is introduced with a discussion of its reliability and validity, and data collection and analysis methods are explained. The chapter ends with the measures taken to ensure the protection of human subjects.

An exploratory survey research design was utilized to study the stress impact that critical incidents have on hospital workers and the effectiveness of CISD sessions. The study is also descriptive in that it describes the study population in terms of occupational role, age, gender, marital status, parental status and length of employment to explore what influence, if any, those variables might have on the stress impact felt by study participants.

The research questions posed by this study are: 1) What is the stress impact of critical incidents on health care personnel in the hospital setting? 2) Do hospital staff who have participated in a CISD session perceive the CISD model of intervention as helpful in decreasing stress symptoms?

Conceptual and Operational Definitions of Key Concepts

Critical incidents were conceptually defined as sudden, impactful, or unexpected traumatic events that occur outside the range of ordinary crisis or trauma. In this study a CI was operationalized on three domains; time frame, novelty of the event, and emotional response to the event. Question1, in Part 1 of the questionnaire (Appendix C), defines a CI as having occurred in the past two years, was outside the range of ordinary

health care experiences, and elicited unusually strong emotional reactions such as anxiety, helplessness, anguish, guilt or grief.

Critical incident stress (CIS) was conceptually defined as the psychological stress resulting from a crisis event that creates an emotional disequilibrium often producing symptoms of increased cognitive and behavioral arousal. The impact of CIS was operationally defined by using a checklist of symptoms that reflect intrusive thoughts and avoidance responses. Respondents were asked to indicate the frequency with which they experienced those symptoms (Part 1, Question 4).

Effectiveness of the Critical Incident Stress Debriefing model of intervention was conceptualized as the self-reported reduction of stress symptoms following a debriefing session. The operational definition was designed to reflect direct and indirect measurements of effectiveness. First, respondents were asked to self-report the reduction of stress symptoms following a CISD. Secondly, respondents were asked to rate their agreement or disagreement with statements reflecting the CISD tasks of cognitive reappraisal, disclosure, and peer support (Part 2, Questions 6-12).

Research Design

This study is exploratory and descriptive in nature, using a cross-sectional survey design. A questionnaire was used to collect quantitative data, primarily through close-ended questions. A strength of a self-administered survey is it's feasibility for large samples (Rubin & Babbie, 1997). Such a design was chosen to allow for studying a larger number of hospital participants resulting in data that would be more readily generalized to similar patient care units across hospital settings. Although survey research allows for larger sample sizes, the standardization of questions can compromise

detail necessary to fully understand complex issues (Rubin & Babbie, 1997). A few open-ended questions were used to seek specificity and detail as to the nature of each respondent's critical incident and his/her debriefing experience. The specificity and detail was sought to provide more in-depth understanding of individual differences related to stress impact and debriefing effectiveness.

Study Population

The study population consisted of men and women who work in a variety of roles within selected units or departments of Mercy/Unity Hospital, one community hospital operating on two campuses in the northern suburban area of Minneapolis, Minnesota. It included staff who are exposed to unexpected situations that, because of their traumatic nature, cause strong emotional responses. Respondents who had not experienced a critical incident were included in data analysis to examine the prevalence of critical incident occurrences in relation to the hospital unit or department. Respondents who had experienced a critical incident were included in data analysis of stress impact and debriefing effectiveness.

Study Sample

Participants were recruited through a non-probability, purposive sampling procedure. Because CISD sessions are confidential with participant names not recorded, the study relied on self-selection of subjects. Due to time and resource limitations of the study, a method of determining efficient and appropriate targeting of recruitment efforts was necessary. Since information related to the employment positions and assigned units or departments of session attendees are included in CISD records, two years of session records (the length of time the CISD program had been in existence) were reviewed to

determine which units or departments would be targeted for participant recruitment. Targeted units included the Behavioral Health Program at Mercy as well as the Intensive Care/Critical Care and Emergency Departments at both Mercy and Unity campuses. Some departments, such as Security and Administrative Nursing Supervisors, have accountability to respond to critical incidents throughout the hospitals and therefore they were targeted for study recruitment as well.

Procedures

Measurement Tools

Two measurement tools were combined on the questionnaire used in this study. The first was a 15-item Impact of Event Scale (IES) used in Part 1 of the questionnaire to measure the subjective stress impact of a critical incident. The second was a series of questions developed to provide a description of the critical incident, respondents' perceptions of CISD effectiveness, and respondent demographics. The questionnaire was self-administered and confidential.

The IES was developed in 1979 by Mardi Horowitz, MD, Nancy Wilner, BA, and William Alvarez, MA, at the Department of Psychiatry, University School of Medicine in San Francisco. In their search for a measurement tool that could evaluate both serious life events and subjective impact, they found instruments limited to the study of the impact of bereavement events. The IES was developed to assess subjective distress for any life event on two sub-scales, intrusive thoughts and avoidance responses. These qualities in the experience of traumatic events were found frequently in the literature. Respondents were asked to rate 15 symptoms for frequency, indicating whether they experienced a symptom 'not at all,' 'rarely,' 'sometimes,' or 'often'. For data analysis,

responses were scored consistent with the IES scoring system: 0, 1, 3, and 5 respectively. Testing of the instrument showed high split half reliability of 0.86 and high test-retest reliability of 0.87. Measures of validity across populations experiencing different events was found to be high with high measurement sensitivity (Horowitz, Wilner, & Alvarez, 1979).

The remaining questions on the questionnaire were developed for this study from a review of the literature. Part 2 of the questionnaire asked for respondents' perceptions of the effectiveness of a CISD session (if they attended one) in reducing the symptoms presented in the scale. Respondents were asked to rate seven 'helpfulness' statements for agreement, indicating whether they 'strongly disagree,' 'disagree,' 'agree,' or 'strongly agree' with each statement. For data analysis, responses were assigned scores of 1, 3, 5, and 7 respectively to remain consistent with the IES scoring system. They were also asked to identify in what ways they found the debriefing helpful or not helpful. The third section requested demographic information to allow data analysis around respondent age, gender, marital status, presence of children in his/her family, length of employment and occupation.

Measurement Issues

Respondents in this study were asked to recall a critical incident within the past two years (to coincide with the time period CISD services have been available at Mercy/Unity), to describe it, and to complete the IES as they recalled their experience during the immediate aftermath of the critical incident, before a debriefing was held. Due to the limited time frame for this study as well as the unpredictable frequency of future CISD requests, asking respondents to recall past events was used to increase the potential

data available for analysis, although relying on respondent memories of an experience can decrease the study reliability in that stress symptoms may or may not be recalled accurately. To control for lack of reliability and to allow data analysis around debriefing attendance when debriefing services existed, the time frame was limited to two years.

Two pretests were conducted with CISM team members to test for face validity of the questionnaire; the first with four Mercy/Unity members and the second with eight team members from United Hospital. The questionnaire was reviewed to determine any problems with sentence structure, question clarity, and unbiased language. Participants in the pretests judged the tool to have face validity.

To control for systematic error, questions were carefully constructed using unbiased language. In an effort to control for response rate bias, where respondents may not be representative of non-respondents (Rubin & Babbie, 1997), recruitment was done in person at unit staff meetings whenever possible and staff rosters were consulted to assure that staff who were not in attendance received a hand delivered questionnaire directly to their mailboxes. Response rate bias could not be totally eliminated, however. The very nature of a respondent's participation in a debriefing raises the issue that they may feel a greater need for the service and may present a bias in response to debriefing effectiveness. To reduce the likelihood of social desirability bias and to assure confidentiality potential respondents were asked to return surveys by mail.

Data Collection

Data from the study was collected using the self-administered questionnaire in two ways. First, invitations to participate were extended in person by the principle investigator through presentations at the unit staff meetings identified for inclusion in the

study. A letter inviting participation (Appendix A), the consent form (Appendix B), and the questionnaire (Appendix C) with an attached self-addressed, stamped return envelope were provided each prospective participant. Unit presentations occurred over a one week period, between February 10 and February 17, 1999. A total of 13 meetings were attended resulting in 150 staff members receiving questionnaires.

Secondly, questionnaire packets with the letter inviting participation, the consent form, and the envelope were placed in staff mailboxes within each of the units. Efforts were made to reach all staff in each unit by utilizing unit staff rosters provided by unit managers. The rosters were cross referenced with meeting attendance sheets to identify staff who were not in attendance and each received the questionnaire packet in their mailbox within two days of the unit meetings. 251 questionnaires were delivered to mailboxes resulting in 401 potential participants.

The first data collection period ended on February 26th with 77 questionnaires returned for a 19% return rate. Because the response rate was so low, a second data collection effort was made. On March 12th questionnaire packets were again placed in all staff mail boxes in the departments/units included in the study. The packet was identified as a second request. The second data collection period ended March 26th with 76 additional questionnaires being returned for a total of 153, an overall 38% return rate. Of the 148 that were included in the study, 35 (24%) respondents indicated they had not experienced a CI in the previous two years, leaving 113 (76%) for full data analysis of the stress impact of critical incidents and the effectiveness of debriefings.

Data Analysis

Data was analyzed using SPSS software. Responses for the questions on the survey were coded for quantitative analysis. Qualitative responses were reviewed for themes and coded for quantitative analysis as well. Univariate analysis for measures of central tendency and frequency distributions were analyzed. Bivariate and multivariate analysis using both parametric tests (such as one way NOVA) and non-parametric tests (such as Chi-square and Spearman rho) were used because variables were employed at all measurement levels, nominal through ratio.

Protection of Human Subjects

Prior to data collection, the research proposal was reviewed and approved by the Mercy/Unity/Allina Institutional Review Board (Appendix G) and by the Augsburg College Institutional Review Board (Appendix H). The numbers assigned to the study by Allina and Augsburg were 12-98-70 and 99-06-3 respectively. All data during collection and analysis was kept secure and confidential and was destroyed upon completion of the study in May, 1999.

Consent to participate was outlined in the consent form provided with the questionnaire to potential study respondents. The purpose of the study, study procedure, and risks and benefits were detailed in the consent form. Confidentiality and voluntary participation, including the choice to skip any questions or withdraw from the study at any time without consequence, were assured within the consent language. Requesting potential participants to complete questionnaires outside unit meetings and to return them by mail assured respondents would not be identified with questionnaire responses.

Summary

This chapter explained the key concepts of the study and the research design, the study population, and the specifics of the study sample. The procedures followed in the study were presented including: the measurement tools and a discussion of measurement issues, reliability, and validity; the data collection and analysis; and the protection of subjects. Chapter five will present the findings from the data analysis.

CHAPTER 5: FINDINGS

This chapter presents the results of the study. It begins with demographic characteristics of respondents. Types of critical incidents described by respondents are presented next. Data pertinent to the subjective stress impact and helpfulness of CISD are presented in that order and organized around the two research questions: 1) What is the stress impact of critical incidents on health care personnel in the hospital setting? 2) Do hospital staff who have participated in a CISD session perceive the CISD model as helpful in decreasing stress symptoms?

Profile of Respondents

There were a total of 148 respondents in this study. Of these, 113 (76.4%) indicated they had experienced a critical incident (CI) and 50 (44.2%) indicated they had attended a Critical Incident Stress Debriefing (CISD) session following the incident. Table 5.1 illustrates that nearly half of the females experiencing a CI attended a debriefing session as compared to slightly more than one-quarter of the men.

Table 5.2 compares sociodemographic characteristics of men and women among respondents of the study. Fully three-quarters of the respondents were women. The mean age across both genders was 40.5, ranging from 22-62 years old, with the majority of respondents between 30 and 50 for both gender groups. A larger proportion of women than men were married and, not surprisingly, the highest occupation represented was nursing, which consisted of registered nurses, licensed practical nurses, and certified nursing assistants/ personal care attendants. Length of employment across gender averaged 13.3 years, ranging from less than a year to 35 years. Of interest, proportionately more of the men were employed less than 10 years and more of the

Table 5.1: Respondents Experiencing a CI (n=112)[1] and Attending a CISD (n=49)[2] (in percents)

	Male	Female
(n)	(26)	(86)
Attendance:		
Yes	26.9	48.8
No	73.1	51.2

[1] One respondent is excluded from this analysis because he/she did not provide any demographic information.

[2] These 49 respondents are from the total sample of 112.

Table 5.2: Demographics of Respondents (in percents)[1] (n=147)[2]

	Men	Women
(n)	(35) 24%	(112) 76%
Age:		
20-29	17.1	16.0
30-39	34.3	29.1
40-49	34.4	40.9
50-59	14.3	12.7
60+		0.9
Marital Status:		
Married	54.3	73.2
Domestic Partner	2.9	2.7
Single	28.6	12.5
Divorced	11.4	8.9
Widowed	2.9	2.7
Occupation:		
Nursing	35.5	79.5
MD	20.6	3.6
Security	20.6	1.8

[1] Percents may not equal 100 due to rounding.

[2] One respondent is excluded from this analysis because he/she did not provide any demographic information.

Table 5.2 (continued): Demographics of Respondents (in percents)[1] (n=147)[2]

	Men	Women
(n)	(35) 24%	(112) 76%
Social Worker/Chaplain	5.8	0.9
Other	17.6	14.3
Length of Employment:		
Less than 10 years	69.8	39.2
More than 10 years	30.3	60.8
Respondents with Children:		
Yes	57	79
No	43	21

[1] Percents may not equal 100 due to rounding.

[2] One respondent is excluded from this analysis because he/she did not provide any demographic information.

women were employed more than 10 years. The highest overall percentage (25.7) was employed more than 20 years. Three-quarters of all respondents had children.

Types of Critical Incidents

Before attempting to answer the first research question, what is the stress impact of critical incidents on health care personnel in the hospital setting, the types of critical incidents experienced by respondents should be examined. Respondents were asked to recall and describe an incident they had experienced in the previous two years that had elicited an unusually strong emotional reaction Open-ended responses were transcribed, analyzed for similarities and themes, grouped by category, and coded accordingly. Table 5.3 presents the frequency of the types of incidents described by respondents. It is important to note that the frequency reflects the number of respondents who cited that type of incident. Because an incident could have been experienced and described by more than one respondent, total numbers reflect multiple responses.

Child Deaths

The most frequently cited experiences felt to be critical incidents were the deaths of children. Deaths involving children being hit and killed by motor vehicle accidents comprised 13 of the 27 descriptions. Unusual deaths included cardiac arrests of children (a nine and a 14 year old) or unusual circumstances: "I was in the Emergency Room [ER] when a seven-month old came in DOA [Dead on Arrival] after playing in a sandbox and aspirating sand. We spent at least 15-20 minutes trying to ventilate the child;" and "[a] mother [was] brought into the Emergency Room after stabbing and killing her little girl."

Table 5.3: Prevalence of CIs and CISD Attendance (in percents) by Category

	Prevalence of CI		CISD Attendance	
	Frequency	Percent	Yes	No
(n)			(49)	(60)
Type of Incident:				
Death of a child (up to age 16)	27	24.8	37.9	62.1
Assault on staff	23	21.1	52.2	47.8
Death of a Young Adult (age 16-21)	13	11.9	50.0	50.0
Unsuccessful/Unusual Patient Resuscitation Attempts	12	11.0	15.4	84.6
Difficult family	9	8.3	88.9	11.1
Multiple events	8	7.3	60.0	40.0
Death of an Adult (over 21)	6	5.5	14.3	85.7
Attempted Patient Suicide	5	4.6	100.0	
Other	6	5.5	33.3	66.7
Total	109	100		

Staff Assaults

Assaults on staff were cited nearly as frequently as the death of a child. This category includes being an actual victim of an assault or threatened assault, or being a witness to an assault on a staff peer. Threatened assault included the presence of a perceived weapon: "There was a bomb threat and I safely disarmed the man and beat him up pretty bad. Here, all along, he just had a frozen burrito. I was very traumatized;" and "Our staff was held hostage by a patient's family member. The gun turned out to be fake." One respondent described the following experience:

> A patient's father phoned about the care and was extremely threatening and abusive. He called back several times all night. He was irrational and we feared for the welfare of the mother and child at home. I thought he may come to the Emergency Room with a gun. I was so shaken that I cried in the ER, which I've never come close to doing before.

Analysis revealed 6 staff were victims of assault and 17 either witnessed assaults or were team members of the assaulted staff person. This indicates witnessing a peer being assaulted has a strong emotional impact as well:

> I was in the office. When I stood up, I saw a staff member on the floor in the hall being beaten on his head by a patient's fist. The patient kept pounding his (staff's) head and we could not get him to stop.

Unsuccessful / Unusual Resuscitation Attempts

Unsuccessful or unusual patient resuscitation attempts were third in terms of most frequently cited incidents. First attempts or unexpected involvement in resuscitation attempts were described: "Patient was in cardiac arrest and I did an EKG - am used to

doing only routine EKG's. Patient died while doing EKG....[I was] not prepared for this caliber of incident;" and

> Code Blue - ICU. 83 year old male patient with Chronic Heart Failure. Patient's brother responded to second code with me (first code 30 minutes prior with successful compressions was my first code). Unsuccessful second code on same patient with 90 minute compressions.

Prolonged or highly unusual attempts were described: "Individual transferred to ICU in acute respiratory distress. His condition quickly deteriorated to a Code Blue. Forty-five minutes of resuscitation efforts failed. It happened so quickly it was difficult for family and staff;" and "A Code Blue was occurring and the patient's family, of different ethnic origin, started dancing and throwing a foul smelling liquid at the staff to exorcise demons and chanting to awaken the patient's spirit."

Young Adult Deaths

Incidents involving 16-21 year old victims were categorized as teens/young adults for this study. Incidents seemed to involve accidental death, "young 21 year old male that became brain dead after a snowmobile accident", or violent deaths, "Twenty year old man killed in Russian Roulette - brains were hanging out the back of his head whenever we touched him."

Difficult Family Involvement & 'Other' Incidents

Caring for patients with the involvement of difficult families was cited by respondents with more frequency than the death of an adult, multiple events, patient suicide attempts, and 'other' category. Difficult family incidents often involved futile care of dying patients or disruptive family behaviors: "Muslim woman was considered a futile

care case by multiple MD's, family insisted everything be done but then verbally, physically abused staff and blamed staff for her death;" "dying patient with extremely difficult family - rude, violent, disruptive;" and "caring for a labor intensive patient for many months with colleagues and being bullied/abused by family members' actions." Incidents involving unexpected, negative outcomes for which staff described some statement of perceived personal responsibility or human error were included in an 'other' category.

Types of Incidents and CISD Attendance

Table 5.3 also presents CISD attendance within the nine incident categories. A qualitative analysis of described incidents initially resulted in a large number of categories (19) with few incidents per category. The categories were then collapsed to nine final categories but no statistical significance of the association between type of incident and CISD attendance was found.

Reasons for Non-CISD Attendance

Response data was analyzed to determine why respondents had not attended a CISD after a critical incident. For operational purposes, the CISM team wanted to know if particular barriers to attendance existed that could be removed, thereby increasing hospital staff opportunity to attend CISD sessions. Respondents were asked to check all items that applied to their situation so responses are not singly exclusive and more than one reason could be listed by a respondent.

The most frequently listed reason for not attending was that a CISD session was not held or was presumed to not have been held (see Table 5.4). The next most

Table 5.4: Frequency of Reasons Cited For Not Attending a CISD (in percents)[1]

Item (n)	Total Respondents	Within Gender	
		Male	Female
A CISD was not held (27)	18.2	20.0	17.9
A CISD was scheduled when I wasn't working and it was inconvenient for me to attend (13)	8.8	0.0	11.6
Other (9)	6.1	17.1	2.7
A CISD was held but I didn't think I needed to go. (8)	5.4	11.4	3.6
A CISD was held but I wasn't informed (3)	2.0	2.9	1.8
A CISD was held while I was working but it was too busy for me to attend (3)	2.0	2.9	1.8
I don't know what a CISD is (3)	2.0	5.7	0.9

[1] Respondents were asked to indicate all reasons that applied, therefore percents will not equal 100.

frequently checked item was that a CISD session was scheduled when staff were not working and it was inconvenient to attend. For those respondents who checked 'other', nearly half of them indicated they would debrief with an informal support system.

In summary, types of events that are perceived as critical incidents by hospital staff are consistent with the literature. Incidents involving deaths of children and young adults, assaults on staff, and unsuccessful/unusual resuscitation measures were cited most frequently. Although attendance at a CISD session following a patient suicide, events involving difficult families, and multiple events was high, frequencies of some incidents were too low to conduct statistical analysis for associations between type of incidents and CISD attendance.

Research Question 1: What is the Stress Impact of Critical Incidents on Health Care Personnel in a Hospital Setting?

To determine the impact of critical incidents on hospital personnel, respondents were asked to rate the frequency of stress symptoms using the IES tool as described in Chapter 4. First, the presence of reported symptoms was analyzed for frequency following the method used by Horowitz, Wilner, and Alvarez (1979). Symptoms which were reported as present, whether rarely, sometimes, or often, were indicated in frequency calculation. Second, mean scores on each item and both sub-scales were analyzed and gender comparisons made. Thirdly, data was analyzed to ascertain whether the type of critical incident or occupation had any influence on sub-scale scores. Lastly, mean sub-scale scores by gender were examined in relation to CISD attendance.

Frequency of Stress Symptoms

Table 5.5 presents a gender comparison of symptom frequency and mean scores. The three most frequently reported symptoms for both men and women were intrusive symptoms: "I had waves of strong feelings about it;" "I thought about it when I didn't mean to;" and "Pictures about it popped into my mind." The fourth most frequently reported symptom for both genders was an avoidance symptom: "I avoided letting myself get upset when I thought about it or was reminded of it." For both groups, intrusion symptoms were reported more frequently than avoidance symptoms.

Mean Scores of Stress Symptoms

The same finding held true for total mean sub-scale scores. The total mean intrusion sub-scale score (items A,D,E,F,J,K, and N on the questionnaire [see Appendix D]) was 14.8 (SD= 8.6, range 0-35) and the total mean avoidance sub-scale score (items B,C,H,I,L,M, and O on the questionnaire [see Appendix D]) was 11.8 (SD=8.0, range 0-40). The higher mean score for intrusion was consistent for both genders. It is interesting to note a gender comparison of sub-scale scores also found on Table 5.5. The mean scores for the avoidance sub-scale are quite equal between gender, but it is higher for women on the intrusion sub-scale. However, an independent t test showed no statistical significant difference between women and men on the intrusion sub-scale.

Mean scores were computed according to type of CI (Table 5.6) and were analyzed to determine whether the type of incident had any statistical significance on the symptom sub-scales. Because both intrusion and avoidance mean sub-scale scores were normally distributed for this sample population and mean sub-scale scores were treated at

Table 5.5: Impact of Event Scale: Frequency of Symptoms Present (in percents) and Mean Scores of Symptoms

	Frequency Present		Mean Scores			
(n)	Male (26)	Female (86)	Male Mean	(SD)	Female Mean	(SD)
Item:						
Intrusion Items (range 0 - 5)						
I had waves of strong feelings about it.	84.6	91.8	2.3	(1.6)	2.9	(1.6)
Other things kept making me think about it.	73.1	84.7	1.7	(1.7)	2.2	(1.6)
I thought about it when I didn't mean to.	88.5	94.2	2.7	(1.7)	3.0	(1.4)
Pictures about it popped into my mind.	80.0	89.4	1.8	(1.5)	2.8	(1.7)
Any reminder brought back feelings about it.	61.5	80.2	1.6	(1.6)	2.2	(1.6)
I had trouble falling asleep or staying asleep because of pictures or thoughts about it that came into my mind.	46.2	54.7	1.2	(1.8)	1.4	(1.7)
I had dreams about it.	30.8	39.5	0.8	(1.5)	0.9	(1.4)
Intrusion Sub-scale (range 0 - 35)			12.2	(8.9)	15.3	(8.2)

Table 5.5 (continued): Impact of Event Scale: Frequency of Symptoms Present (in percents) and Mean Scores of Symptoms

	Frequency Present		Mean Scores			
(n)	Male (26)	Female (86)	Male Mean	(SD)	Female Mean	(SD)
Item:						
Avoidance Items (range 0 - 5)						
I was aware that I still had a lot of feelings about it, but I didn't deal with them.	57.7	69.4	1.3	(1.6)	1.4	(1.4)
I avoided letting myself get upset when I thought about It or was reminded of it.	76.0	87.1	1.9	(1.8)	2.5	(1.7)
I tried to remove it from memory.	61.5	70.9	1.3	(1.5)	2.0	(1.8)
I tried not to talk about it.	61.5	54.1	1.6	(1.8)	0.9	(1.1)
My feelings about it were kind of numb.	60.0	62.4	1.6	(1.9)	1.5	(1.5)
I felt as if it hadn't happened or it wasn't real.	42.3	37.2	1.3	(1.7)	0.9	(1.4)
I stayed away from reminders of it.	15.4	52.3	0.5	(1.2)	1.1	(1.4)
I tried not to think about it.	61.5	71.8	1.5	(1.8)	1.8	(1.6)
Avoidance Sub-scale (0 - 40)			11.3	(9.5)	11.7	(7.6)

Table 5.6: Mean Symptom Sub-scale Scores by Type of Incident

Item:	Sub-scales: Intrusion[1] (n=113) (range 0 - 35) Mean (SD)	Avoidance[2] (n=113) (range 0 - 40) Mean (SD)	Helpfulness[3] (n=50) (range 7 -49) Mean (SD)
Other	24.7 (7.1)	19.7 (10.9)	38.5 (2.1)
Difficult Family	18.4 (9.4)	16.4 (7.8)	27.0 (11.0)
Assault on Staff	16.6 (8.7)	13.9 (8.9)	33.9 (7.4)
Death of a Child	14.4 (7.9)	10.5 (7.5)	39.0 (4.9)
Death of a Young Adult	13.8 (7.6)	9.1 (6 .3)	37.4 (4.3)
Death of an Adult	13.0 (7.7)	8.0 (2.9)	23.0
Attempted Patient Suicide	11.0 (5.4)	12.6 (6.8)	35.2 (4.4)
Multiple Events	10.9 (11.4)	8.3 (5.9)	35.5 (7.7)
Unsuccessful/Unusual Resuscitation Attempt	10.8 (7.8)	10.2 (7.3)	33.0

[1] One-way ANOVA = .038 ($p \leq .05$)

[2] One-way ANOVA = .050 ($p \leq .05$)

[3] not statistically significant

the interval level of measurement, parametric statistical tests were chosen to examine the relationship between variables. One way ANOVA tests were conducted using the types of critical incidents as independent variables and the mean scores for each sub-scale as dependent variables. Statistically significant relationships were found between types of incident and intrusion and avoidance scores respectively.

It is interesting to note that the 'other' category, cited with low frequency by respondents, had the highest mean scores in both sub-scales, followed by difficult families and then assaults and child deaths. Multiple comparisons of independent types of incidents and sub-scale scores were conducted using a Bonferroni statistical test. A statistically significant comparison of .046 ($p \leq .05$) was found between 'other' incidents and unsuccessful and unusual resuscitation attempts. A mean difference of 13.83 between the two types of incidents was evident when intrusion sub-scale scores were examined. Recall that incidents coded in the 'other' category specifically included events for which staff described some statement of personal responsibility or human error resulting in an undesired outcome.

Effect of Stress Impact on CISD Attendance

Mean sub-scale scores were computed according to CISD attendance. Table 5.7 shows that the intrusion and avoidance mean scores were higher for those attending CISD than for those who did not attend. However, it is interesting to note that when data were analyzed for sub-scale mean scores and CISD attendance by gender, a slightly different picture emerges. Although women who attended CISD sessions had higher mean scores for both intrusion and avoidance sub-scales than women who did not attend, men who did not attend CISD sessions had higher mean sub-scale scores than those who did attend.

Table 5.7: Mean Scores of Symptom Sub-Scales and CISD Attendance

	Sub-scale	
	Intrusion	Avoidance
CISD Attendance	Mean (SD)	Mean (SD)
Total :		
Yes	16.6 (8.4)	13.0 (7.9)
No	13.3 (8.5)	10.9 (8.1)
Male		
Yes	9.4 (4.4)	8.0 (5.3)
No	13.2 (10.1)	12.7 (10.6)
Female		
Yes	17.4 (8.1)	13.8 (8.0)
No	13.4 (7.8)	10.2 (6.8)

In summary, intrusion symptoms were reported more frequently than avoidance symptoms for both genders. Although a gender comparison of mean scores for avoidance symptoms reveal little difference, intrusion symptoms for women are higher (although not statistically significant) than men's. Gender, occupation, and age had no influence on symptom sub-scales, however a statistically significant relationship was found between type of CI and intrusion symptoms. Lastly, women who attended a CISD session had higher intrusion and avoidance symptoms than those who did not attend. Conversely, men who attended a session had lower intrusion and avoidance symptoms than those men did attend.

Research Question 2: Do Hospital Staff Who Have Participated in a CISD Session Perceive the CISD Model as Helpful in Decreasing Stress Symptoms?

To answer the second research question the questionnaire asked for respondents' perceptions of the helpfulness of CISD on a seven item scale. Respondent scores could range from 7 to 49. The overall mean helpfulness score for the study population was 34.8 with a standard deviation of 7.95. More specifically, respondents were asked to rate the effectiveness of a CISD session in reducing stress symptoms. Of the 49 responses, 80% agreed or strongly agreed that stress symptoms were reduced and 20% disagreed or strongly disagreed. It appears that staff generally perceive the CISD model as helpful.

Mean Scores by Type of CI and Symptom Sub-scales

Mean scores on the helpfulness scale were analyzed according to type of CI (see Table 5.6). Mean scores were highest in incidents involving the death of a child, followed by the 'other' category and death of a young adult. Incidents involving difficult

families and deaths of adults without unusual circumstances had the lowest mean helpfulness scores.

Because mean sub-scale scores for helpfulness was not a normally distributed dependent variable for this sample population, non-parametric tests were chosen for data analysis of the helpfulness variable. A Spearman's rho test to determine the existence of correlations between the intrusion and avoidance sub-scales and helpfulness of CISD showed a statistically significant negative correlation ($r = -.284$, $p < .05$) between avoidance symptoms and perceived helpfulness of CISD sessions. This seems to indicate that the higher the avoidance scores, the less helpful the participant found CISD.

Perceptions of Ways CISD Sessions Are Helpful

To determine in what ways CISD was seen as helpful, six additional statements were included on a Likert scale for respondents to consider and rate accordingly. Table 5.8 presents a gender comparison of responses to ways CISD was perceived as helpful. Over 90% of the total respondents agreed or strongly agreed that hearing others' perceptions of the event and telling their own story in a safe, non-judgmental environment was the most helpful. Chi Square tests showed no association between gender and perceptions of CISD helpfulness. It is interesting to note that 100% of the men agreed that attending a CISD allowed them to receive support that they might not otherwise have received compared to 78% of the women.

Opportunity was available for respondents to comment on any additional ways the CISD experience was helpful as well as ways it was not helpful. Twenty-five respondents wrote comments that seemed to cluster into four main categories of ways CISD was helpful.

Table 5.8: CISD Helpfulness: Frequency (in percents) and Mean Scores

	Frequency Agree		Mean Scores	
(n)	Male (9)	Female (38)	Male	Female
Helpfulness Item (range 1-7)[1]:				
Stress symptoms that I experienced in the immediate aftermath were reduced by CISD	100.0	74.4	4.2 (0.7)	4.4 (1.5)
It was helpful to hear others' perception of the event	100.0	97.6	5.2 (0.7)	5.7 (1.2)
It was helpful to tell my story of the event with others who were involved	100.0	92.9	5.4 (0.9)	5.4 (1.3)
I was able to think about the event in a more helpful way after the CISD	66.6	79.0	4.8 (1.6)	4.9 (1.5)
I was able to receive support that I might otherwise not have received	100.0	77.5	5.0 (0.0)	5.0 (1.5)
I gained knowledge about Critical Incident stress from attending the debriefing	77.8	85.0	5.0 (1.4)	5.2 (1.2)
The CISD provided a safe, non-judgmental environment	100.0	90.2	5.4 (0.9)	5.3 (1.3)
Helpfulness Sub-scale (range 7-49)			36.1 (1.6)	34.4 (1.3)

[1] To remain similar to the IES, responses to helpfulness items were scored 1, 3, 5, and 7 for 'strongly disagree,' 'disagree,' 'agree,' and 'strongly agree' respectively.

The most frequently listed comments were related to acquiring a greater awareness or understanding of the event and its effect on others. For example: "Made me aware of the impact on each individual person that was involved in the incident;" "Seeing that some management people were involved also. I have been angry at them for not helping. They were as frustrated as I;" " Others viewpoints of the family's perception helped me understand their behavior;" and "I got to hear feedback from the MD involved-proved he was human."

The second category reflected feelings of validation and not being alone with their feelings: "Others viewpoints validated my feelings;" "It let me know that you shouldn't be immune or numb and just get used to children or others dying-it's OK to feel bad;" and "It was helpful, others had the same feelings/responses."

Feeling supported by the team and reinforcing team work was a third strong theme (as seen in these examples): "The staff bonded and supported each other, creating a closer unit;" "Reinforced teamwork/team experience;" and "Mainly, the support that the experience was acknowledged. So often we just go on to the next."

The last category includes storytelling or opportunities to communicate: "Sitting, talking with others that were involved in the incident;" "Opened communication between involved parties;" and "Able to listen to others who shared in the same event."

Perceptions of Ways CISD Was Not Helpful

Sixteen respondents wrote comments describing how or why CISD had not been helpful. Two themes clearly emerged and were cited by 11 respondents. The first was a perception of a lack of support within the CISD session or from hospital management, for example: "Did not feel supported;" "Did not feel they were accepting, sometimes felt

they were more for the family;" "I felt I was attacked and my feelings not acknowledged;" and "Was not supported entirely by management." The second appeared to identify the lack of problem-solving or resolution of a perceived problem: "I really would have appreciated management's comments and/or assurances about what is, or will be, done to increase staff safety;" "Nothing was said about our discussion going to people in authority who could prevent this from happening again," "It didn't do problem-solving," and "I wish CISD could come in and teach conflict resolution with staff...."

The researcher reviewed questionnaires to determine any patterns related to type of incident and perceptions of lack of support and problem-solving. It became clear that respondents were involved in either a staff assault on the Behavioral Health unit or were involved in the complex and very long term care of a specific patient in ICU with a difficult family who was perceived as abusive. While caution should be taken when drawing conclusions, both involved cumulative stress and threats or perceived threats to staff.

Summary

80% of respondents reported that stress symptoms were reduced after attending a CISD session. Ninety percent agreed or strongly agreed that telling their story and hearing others' perceptions of an event in a safe, non-judgmental environment was the most helpful. Respondents commented that CISD attendance helped them gain greater understanding of the event, helped validate their feelings, and reinforced team work. No statistically significant associations were found between gender, age, occupation, or length of employment and perceived helpfulness of CISD sessions. A statistically significant negative correlation was found between avoidance symptoms and CISD

helpfulness. Respondents cited lack of problem solving or problem resolution in the CISD session as not helpful. Chapter six will further discuss the significance of the data, the study's strength and limitations, and the implications for social work practice and further research opportunities.

CHAPTER 6: DISCUSSION

The final chapter will review and discuss the major findings of the study, connecting salient points to the literature. Strengths and limitations will be identified and implications for social work policy and practice will be presented. Lastly, future research options are discussed.

Major Findings

Types of Critical Incidents

The most frequently cited events perceived as critical incidents, a child death and assaults on staff, were consistent with two of the four characteristics found by Mitchell and Bray (1990) to be perceived as traumatic. The study of emergency nurses by Burns & Harm (1993) also found violent threats to staff listed with similar frequency as a child death; the two categories comprised nearly half of the incidents cited. Werner at al. (1992) found that a first experience of emergency workers or events that occurred when workers felt unprepared were traumatic. This study found that descriptions of unsuccessful/unusual patient resuscitation attempts reflected first resuscitations experiences or events for which the respondent felt ill-prepared. The prevalence of child deaths, assaults on staff, and unusual patient resuscitation attempts is consistent with the literature.

Subjective Stress Impact

Study Comparisons

The impact of critical incident stress, as measured by the IES, was notable when mean sub-scale scores are compared to scores found by Horowitz, Witner, and Alavarez

(1979). In their study, they tested the stress impact experienced by medical students faced with their first cadaver resection and the impact of serious life events on clinic patients referred for specialized treatment of stress response syndromes. They found that the medical students scored relatively low in both sub-scales while the clinic patients, half of whom were experiencing bereavement and the remainder experiencing personal injuries from accidents, violence, illness, or injuries, scored relatively high (see Table 6.1). Respondents of this study exhibited mean scores which were consistently closer to the clinic patient scores and were in the second quartile of each sub-scale range. Medical students were in the lower quartile and clinic patient scores were in the third quartile for intrusion and the second quartile for avoidance. In addition, mean scores for intrusion symptoms were higher than avoidance symptoms for both genders in this study, similar to the clinic patients experiencing stress response syndromes.

Prevalence of Intrusion Symptoms

A statistically significant relationship was found between intrusion sub-scale scores and the type of CI. Strong intrusion symptoms are consistent with van der Kolk and McFarlanes's (1996) finding that after a traumatic event most people suffer from intrusive thoughts about what happened. The two most frequently cited types of incidents, child deaths and staff assaults, had higher mean scores on the intrusion sub-scale than most other types of incidents. However, incidents described in the 'other' category and incidents involving a difficult family had the highest impact with mean scores that exceeded those for child deaths and staff assaults. Both intrusion and avoidance mean scores for 'other' CIs were very high (24.7 and 19.7) as compared to a child death (14.4 and 10.5, see Table 5.6). Incidents in the 'other' category involved

Table 6.1: IES Symptom Sub-scale Mean Comparisons Between Medical Students, Clinic Patients, and Hospital Staff

Group (n)	Sub-scales			
	Intrusion		Avoidance	
	Male	Female	Male	Female
Medical Students (110)	2.5	6.1	4.4	6.6
Hospital Staff (113)	12.2	15.3	11.3	11.7
Clinic Patients (66)	21.2	21.4	14.1	20.6

respondent statements of perceived personal responsibility or human error resulting in a significant and undesired outcome. Such occurrences in the hospital are called sentinel events. They are career markers that are so powerful as to change the course of a health professional's career, positively or negatively. It is heartening to examine helpfulness scores and discover that the mean helpfulness score for 'other' CIs was second highest, almost the same as mean helpfulness scores for child deaths.

Gender Differences

Gender differences in sub-scale scores were consistent with findings of Horowitz, Wilner, & Alvarez's (1979) study. Mean scores for women were higher in both symptom sub-scales than mean scores for men in this study, indicating women experienced most symptoms more frequently than men.

Gender differences were found in frequency of CISD attendance as well. Nearly half the women who experienced a critical incident attended a CISD as compared to one quarter of men. Mean scores of symptom sub-scales for those who attended CISD sessions also differed by gender. Women who attended CISD sessions had higher mean scores on both sub-scales than those who did not attend, however men who did not attend had higher scores than those who did. The higher intrusion symptoms experienced by women were higher than intrusion symptoms experienced by men and higher than avoidance symptoms for both genders. The higher intrusion symptoms may have influenced the higher attendance by women. Interpretation of gender differences must be approached cautiously due to the low number of male respondents.

CISD Benefits

This study found that 80% of respondents attending a CISD agreed or strongly agreed that CISD intervention was helpful. The total mean score for the helpfulness scale was 34.8 (range 7-49). The most frequently cited ways CISD was helpful also had the highest mean scores: 1) It was helpful to tell their story of the event; 2) the CISD provided a safe, non-judgmental environment; and 3) It was helpful to hear others' perceptions of the event.

Disclosing Emotions

Recalling Pennebaker's (1997) work related to disclosure and inhibition, high mean helpfulness scores related to respondents' telling of their own stories and hearing others' disclosures is congruent to the beneficial findings in Pennebaker's (1986, 1993) studies. Although this study does not examine physical benefits of disclosure, it does support Pennebaker's (1997) findings that psychological benefits occur as well. Not only did respondents rate story telling as helpful, but the greatest number of qualitative comments indicated that an increased awareness or understanding of the event was a beneficial outcome of their CISD attendance. This again is congruent with Pennebaker's (1986, 1993) studies.

Interestingly, this study found a statistically significant negative correlation between avoidance symptoms and perceived helpfulness of CISD sessions. It seems to indicate the higher the avoidance symptoms, the less helpful the CISD session. This again is congruent with the literature. Avoiding reminders of the event, trying not to talk about it, and avoiding feelings about the event would point to inhibition tendencies. The CISD

model, which encourages disclosure, would not provide the same benefits to a person inhibiting thoughts and feelings as it might to a person disclosing them.

CISD Environment

The CISD model strongly emphasizes providing group support in a safe environment away from the group's work area, based on confidential and non-judgmental discussion. Criticisms of co-worker performance is not allowed as it is not an evaluation of employee performance or event outcomes. Respondents of this study reported the safe non-judgmental environment provided by the CISD session was helpful. Qualitative comments reflected the benefits of feeling validated and supported, leading to the reinforcement of team work. An environment perceived to be safe and non-judgmental would seem to be conducive to disclosure and to opportunities for validation and support.

Conclusion

Strengths and Limitations

The instrument was constructed using a valid and reliable subjective stress measurement tool. This allowed for data analysis that could compare stress symptom scores with other populations previously studied with the same tool. This study's instrument was designed in three parts for clarity and to allow respondents to skip an entire section easily, if not applicable to the respondent's experience. Both closed and open-ended questions were designed to provide quantitative data for generalizability and qualitative data for richer data analysis.

The study's response rate is slightly lower than the optimum for a self administered survey; however, the number of respondents experiencing a CI was large enough to allow for data analysis that can be generalized to other hospital emergency,

intensive care, and behavioral health units. Time constraints did not allow for a third data collection period and financial constraints did not allow for mailing questionnaires to employees' homes. Because hospitals use a significant number of non-regular, casual employees who might work infrequently, direct mailings to employees homes may have generated a larger number of respondents.

The study size also allowed multiple testing of variables with some statistical significance found between type of critical incident and stress sub-scales. Although the significance was weak, it does identify interesting relationships that could be examined in future studies.

The study relied on respondents to recall past experiences up to two years previous to completing the questionnaire. Memories are less reliable and much more subjective than measurements of current experiences; however, many studies have relied on memory recall (Burns & Harm, 1993; Chemtob, Lay, & Cremniter, 1997; Glen, 1998; Horowitz, Wilner, & Alvarez, 1979). The two year period coincided with the time period CISD services have been available. Because of the reliance on memory, it is uncertain as to what extent measurements taken soon after an experience would have differed.

Respondents were primarily women, creating a need to examine gender differences with caution. For purposes of generalizing to other hospital settings however, hospitals are alike in that the largest occupational group is nursing. That occupation continues to be primarily female. Therefore, data related to females is easily generalized to other hospital settings.

Another limitation is the inability to determine the frequency and impact of critical incidents in hospital units beyond the emergency department, intensive care unit,

and behavioral health program. Because the past two years of CISD records were examined to determine target areas and populations, data predictably reflects incidents that occurred primarily on those units. Although the units mentioned have a higher incidence of critical events, respondents in this study included critical incidents that occurred outside the hospital, in the operating room, the surgical recovery area, radiology, and other medical floors. It would be inadvisable to conclude that staff elsewhere in the hospital do not experience critical incidents.

Implications For Social Work Practice and Policy

Social workers are skilled in group facilitation and crisis intervention, two critical components to the CISD model. Social workers apply their broad range of skills to patient, family, and hospital staff interactions throughout the hospital and are in a unique role as mental health professionals to see and respond to critical incident stress. Findings from this study can increase the awareness of critical incident stress specific to the hospital setting and can suggest possible policy changes in the programs that respond to that stress.

One possibility is to examine the CISD response to a staff assault, which is a significant predictor of critical incident stress. CISD intervention may be helpful in addressing acute stress around a single assault episode, but may be inadequate by itself to provide the amount of support needed by assaulted staff and their work peers. Additional CISM components can provide services that integrate and complement the CISD model. For example, social workers can be instrumental in developing pre-crisis educational curriculum and preparedness training. CISD interventions can also be augmented by

components of a comprehensive response to staff assaults like the Assulted Staff Action Program.

Another finding that might affect practice and policy is to consider the data around what was not helpful in the CISD process. Recall from the previous chapter, a theme that emerged identified a lack of problem solving or resolution of a perceived problem. The CISD model does not incorporate problem-solving into CISD sessions. Any problem-solving would occur outside of the debriefing. A model introduced in Chapter 2, the solution focused debriefing (SFD) group follows the seven CISD stages for the first meeting but identifies two subsequent group meetings with the intent of using the group's collective power to promote positive change (Juhnke & Osborne, 1997). This model may be effective for addressing cumulative events and the cumulative stress reactions associated with those.

In addition, social work practice can be influenced by this work in a broader sense, beyond the narrow scope of critical incident stress debriefing. Although the group model of CISD is beneficial in providing a setting where peer support can assist individuals in coping with a critical incident, some people may avoid seeking help because of discomfort with group settings. Pennebaker's (1986, 1989, 1993, 1997) research demonstrating the benefits of disclosure is mirrored by CISD participants who report the benefits of telling their story. Social workers may find individual contact to be beneficial for those who may not seek the group setting. Storytelling, and the thought process associated with it, appears to be helpful in facilitating coping and could be used in individual contact as well as in group support.

Implications for Future Research

The present study explored the impact of CI on staff in targeted departments or units known to have experienced critical events. A broader study could explore the prevalence and impact of critical incidents throughout the hospital through a larger sample of randomly selected participants. The IES is just one tool the researcher located and selected to measure stress symptoms. It is easily self-administered and appeared to be a satisfactory measurement tool, however another instrument may be found to be as useful.

Another valuable study that would provide richer and deeper data would be a qualitative study of the impact of critical incidents on staff and their families. Exploring the effects of CI stress on employees' personal lives, including family members would provide a picture beyond the walls of the hospital. The effect of critical incident stress on family members of employees has not been studied in depth. Conversely, the effect of families and other social support systems on an employee's ability to cope with CI stress is waiting for exploration as well.

This study design examined the stress impact of critical incidents on hospital staff and determined effectiveness of debriefing interventions through subjective measures involving recollection and self-reporting. Another study with a quasi-experimental, pretest-posttest design using the same IES tool would render more objective measurements of stress symptoms before and after CISD interventions. Changes in stress scores for participants attending a CISD session following a CI could be compared to scores for participants who did not attend. A study designed as such would be a more reliable measurement of CISD effectiveness.

An indirect method of measuring CISD effectiveness might be to examine illness or absentee rates of a selected work unit. A baseline measurement could be determined by examining aggregated personnel data related to absences prior to the introduction of CISD services and again after CISD services had been in place for a determined length of time. Another design might be to identify similar units at two different hospitals, one utilizing CISD services and the other not, then compare employee absentee or attrition rates.

Summary

Hospital staff involved in critical incidents experience both avoidance and intrusion symptoms following the incident. Some types of critical incidents have more of an impact and seem to elicit stronger intrusion symptoms than others.

Critical Incident Stress Debriefing appears to be an effective external mediator for hospital staff coping with CI stress. As an environmental support, the seven-step group model uses peer support to assist participants in normalizing their reactions through disclosure of feelings and reactions to an abnormal event. Hospitals must consider their response to the impact critical incidents have on staff stress. The CISD model is a beneficial intervention to assist staff in coping with critical incident stress.

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Appendix A: Glossary of Terms

Cognitive Appraisal - (a cognitive function of coping) the process through which a person evaluates whether a particular encounter with the environment is relevant to his or her well-being.

Coping - cognitive and behavioral efforts to manager the demands and emotions generated by that which is appraised as stressful; a process of attempting to resolve the stress associated with a life event.

Crisis - a temporary state of disequilibrium and a subsequent state of acute emotional turmoil; a disruption in psychological homeostasis or balance.

Critical Incident (CI) - an event which is typically sudden, unexpected, and outside the range of ordinary human experiences, with a stressful impact sufficient enough to overwhelm the usual effective coping skills of either an individual or group; often called a crisis event.

Critical Incident Stress Debriefing (CISD) - a group meeting or discussion about a distressing critical incident based on core principles of education and crisis intervention and designed to mitigate the impact of a CI and reduce the stress associated with the event.

Critical Incident Stress Management (CISM) - a comprehensive approach to the prevention and mitigation of critical incident stress.

Disclosure - (a behavioral function of coping) talking or writing about thoughts and feelings associated with a traumatic event.

Psychosocial Stress - a particular relationship between the person and environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.

Stress - a response characterized by physical and psychological arousal arising as a direct result of an exposure to any demand or pressure on a living organism.

Traumatic Stress - a stressful reaction with which an individual has difficulty coping, resulting in a state of upset or disequilibrium after experiencing an impactful, traumatic event or critical incident; used as a synonym with the term critical incident stress.

Appendix B: Invitation to Participate

Dear Colleague:

I am an employee of Mercy and Unity hospitals in the process of obtaining a graduate degree in Social Work at Augsburg College and am conducting a research study for a final thesis requirement. I have chosen to study the impact of critical incidents on hospital personnel and staff perception of the effectiveness of Critical Incident Stress Debriefing. This study has been approved by the Mercy/Unity Worksite Violence Prevention Committee, the CISD Steering Committee, and both Institutional Review Boards at Mercy/Unity, IRB #12-98-70 and Augsburg College, IRB # 99-06-3. Your participation is critical to the success of this study, which we hope will provide valuable information to the Mercy/Unity CISD team and hospital employee support services as a whole.

The study has a dual purpose: 1) to understand more fully the stress impact critical incidents have on health care personnel in the acute hospital setting and 2) to determine if, and how, hospital staff who have participated in a formal debriefing perceive the CISD model as helpful or not helpful in reducing stress symptoms.

There are three short sections to the survey which in total, should take no more than 10-12 minutes to complete. The first section involves completing a 15-item scale to rate the impact of a critical incident as you recall your experience in the immediate aftermath of the incident. This should take about 5 minutes to complete.

The second section of the survey will ask about the effectiveness of a formal CISD, if one was offered and if you attended. A few more questions will ask you to rate ways in which you might have found the debriefing to be helpful. I expect this section of the survey to take 5 minutes to complete.

The third section, to be completed by all respondents, asks 6 questions designed to provide some information about you while protecting your confidentiality. This section should take less than 1 minute.

If you choose to participate, you will help expand our knowledge in the area of critical incident stress and our response to hospital staff. Your participation is voluntary and confidential. You may stop completing the survey at any time or may skip any question that bothers you or causes discomfort. Please enclose your completed questionnaire in the envelope provided and route to me no later than _____. Should you have questions, please contact me at 422-4527.

Thank you for your help and support.

Brenda Verbick, Director
Mercy/Unity Social Services
Mercy/Unity CISD Team Member

Appendix C: Consent Form

Critical Incident Stress and the Effectiveness of Debriefing for Hospital Personnel

CONSENT FORM

You are invited to be in a research study of critical incident stress in the acute hospital setting. The researcher is an employee of Mercy and Unity Hospitals and is conducting this study as part of a masters thesis in social work at Augsburg College. The study is titled "Critical Incident Stress and the Effectiveness of Debriefing for Hospital Personnel." You have been chosen as a possible participant in this research study because you are employed at Mercy/Unity Hospitals in a patient care area that is known to experience periodic critical incidents. Please read this form and ask any questions you may have before agreeing to be in the study.

Study Purpose

This study has a dual purpose: 1) to understand more fully, the stress impact critical incidents have on health care personnel in the acute hospital setting and 2) to determine if hospital staff, who have participated in a formal debriefing, perceive the critical incident stress debriefing model of intervention as helpful or not helpful in decreasing stress symptoms.

Study Procedure

If you agree to be in the study, I would ask you to complete the attached questionnaire and return it in the envelope provided. The questionnaire is to be self-administered and should take 10-12 minutes of your time. No further participation or contact will be required of you in this study.

Risks and Benefits

The study does have a minimal risk if you participate. The survey will ask you to recall a particularly difficult event or situation(critical incident) that was outside the range of your ordinary experiences in the course of your hospital work. Such an event may have been highly impactful for you and recalling such an event could elicit normal, but strong, emotional reactions. Should you experience strong reactions and choose to withdraw from the study, you can stop completing the survey at any time. You can also skip any question that bothers you or causes discomfort. Please be aware that participants who experience a critical incident benefit from discussing their experience, that employee assistance program services are available 24 hours a day at no charge and can be reached at 1-800-531-5145.

There are no direct benefits to you should you choose to participate.

Indirect benefits to your participation include contributing to our knowledge of the stressful impact critical incidents have on hospital personnel and the effectiveness of debriefing services in reducing employee stress. The CISD program and hospital policies may be influenced and improved by the information gathered by the study.

Confidentiality

The records of this study will be kept confidential. Survey responses will be anonymous and therefore, any report will not include information that will make it possible to identify you. Only the researcher, the Mercy/Unity statistician, and Maria Dinis, thesis advisor, will have access to raw data. Raw data will be destroyed by September 1, 1999.

Voluntary Participation

Your decision whether or not to participate is anonymous and will not affect your current or future relationship with Augsburg College or Mercy/Unity Hospitals. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Questions/Contacts

The researcher conducting this study is Brenda Verbick. If you have questions about this study, please contact the researcher at (612) 780-7811. Future questions/concerns about your rights as a research study participant can also be directed to Maria Dinis, Thesis advisor, Augsburg College, (612) 330-1704 or to Mercy/Unity Hospital's Institutional Review Board at (612) 336-5524.

Consent Statement

By completing and returning the survey questionnaire, you indicate you have read the above information, have asked questions and received answers, and consent to participate in the study. (Please feel free to keep the consent form for your records.)

Appendix D: Questionnaire

Critical Incident Stress and the Effectiveness of Debriefing for Hospital Personnel

Part 1

A critical incident (CI) is often called a crisis event. It is outside the range of ordinary experiences faced by health care personnel that elicit unusually strong emotional reactions such as anxiety, helplessness, anguish, guilt, or grief.

1. In the past two years have you experienced a CI?
   - ☐ Yes
   - ☐ No (if no, please skip to Part 3)

2. If yes, briefly describe the critical incident. _____
_____
_____

3. On what hospital unit did the CI occur?
   - ☐ Medical / Surgical
   - ☐ Behavioral Health
   - ☐ Emergency Department
   - ☐ Intensive Care / Critical Care
   - ☐ Other (please describe)_____

4. Below is a list of comments made by people after stressful life events. Please take a few moments to recall your most recent CI and check each item, indicating how frequently these comments were true for you during the immediate aftermath of the incident and before a debriefing, if you attended one. If an item didn't occur during that time, please check the "not at all" response.

	Not at all	Rarely	Sometimes	Often
A. I thought about it when I didn't mean to.	☐	☐	☐	☐
B. I avoided letting myself get upset when I thought about it or was reminded of it.	☐	☐	☐	☐
C. I tried to remove it from memory.	☐	☐	☐	☐
D. I had trouble falling asleep or staying asleep, because of pictures or thoughts about it that came into my mind.	☐	☐	☐	☐
E. I had waves of strong feelings about it.	☐	☐	☐	☐
F. I had dreams about it.	☐	☐	☐	☐
G. I stayed away from reminders of it.	☐	☐	☐	☐
H. I felt as if it hadn't happened or it wasn't real.	☐	☐	☐	☐
I. I tried not to talk about it.	☐	☐	☐	☐
J. Pictures about it popped into my mind.	☐	☐	☐	☐
K. Other things kept making me think about it.	☐	☐	☐	☐
L. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	☐	☐	☐	☐
M. I tried not to think about it.	☐	☐	☐	☐
N. Any reminder brought back feelings about it.	☐	☐	☐	☐
O. My feelings about it were kind of numb.	☐	☐	☐	☐

Part 2

A critical incident stress debriefing (CISD) is a team lead, structured group discussion of a CI designed to assist personnel in recovering as quickly as possible from the stress associated with the event.

5. After the critical incident did you attend a CISD session?

☐ No (Complete question 5a then skip to questions 15-21)

5a. What were your reasons for not attending? (Check all that apply)

- ☐ I have never been involved in an incident where a CISD was held.
- ☐ A CISD was held but I didn't think I needed to go.
- ☐ A CISD was held but I wasn't informed
- ☐ A CISD was scheduled when I wasn't working and it was inconvenient for me to attend.
- ☐ A CISD was scheduled when I was working but it was too busy for me to attend.
- ☐ I don't know what a CISD is.
- ☐ Other (please comment)

_____

_____

☐ Yes

Recalling the CISD you attended, please rate the extent to which you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
6. Stress symptoms that I experienced in the immediate aftermath were reduced by a CISD.	☐	☐	☐	☐
7. It was helpful to hear others' perceptions of the event.	☐	☐	☐	☐
8. It was helpful to tell my story of the event with others who were involved.	☐	☐	☐	☐
9. I was able to think about the event in a more helpful way after the CISD.	☐	☐	☐	☐
10. I was able to receive support that I might otherwise not have received.	☐	☐	☐	☐
11. I gained knowledge about CI stress from attending the debriefing.	☐	☐	☐	☐
12. The CISD provided a safe, non-judgmental environment.	☐	☐	☐	☐

13. Please comment on any other ways the CISD experience was helpful.

_____

_____

14. Please comment on any ways the CISD experience was not helpful.

_____

_____

Part 3

Please tell me about yourself.

15. What is your age?_____

16. What is your gender?
    - ☐ Female
    - ☐ Male

17. What is your marital status?
    - ☐ Single
    - ☐ Married
    - ☐ Widowed
    - ☐ Domestic Partner
    - ☐ Divorced

18. Do you have children? (check all that apply)
    - ☐ No
    - ☐ Yes, under 6 years old
    - ☐ Yes, 6-17 years old
    - ☐ Yes, 18 years & older

19. How long have you been employed in an acute hospital setting?_____

20. What is your occupation?
    - ☐ LPN
    - ☐ RN
    - ☐ CNA/PCA
    - ☐ MD
    - ☐ Social Worker
    - ☐ Family Intervention Specialist
    - ☐ Chaplain
    - ☐ Crisis Counselor
    - ☐ Respiratory Therapist
    - ☐ Anesthesiology
    - ☐ Radiology
    - ☐ Security
    - ☐ Other _____

Please return your completed survey in the envelope provided to Mercy Social Service Department, attn. Brenda Verbick, Zip Code 51720. ***Thank you for participating.***

Appendix E: Copyright Reproduction Permission

February 10,1999

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Re: Request for permission to reproduce

I would like permission to reproduce Table 5.2, The CISD Process, from the text Critical Incident Stress Management: A New Era and Standard of Care in Crisis Intervention.

I am a graduate social work student researching the impact of critical incidents on hospital workers and the subjective effectiveness of the CISD process. I would like to include and cite the table in the literature review of my unpublished thesis, to present the process in a concise manner.

Thank you for your assistance.

Brenda Verbick

Brenda Verbick
15060 Yellow Pine St. N.W.
Andover, MN 55304

_ _ _ _ _ _ _ _ _ _ _ _ _

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Caroline J. Zimmerman

Caroline J. Zimmerman, Manager

Good luck with your thesis. Dr. Mitchell would be interested in receiving a copy of your thesis when it is finished, if possible.

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Appendix F: Permission for IES-R Use

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612-421-8888

Unity Hospital
550 Osborne Road N.E.
Fridley, MN 55432-2799
612-421-2222

MERCY & UNITY HOSPITALS
ALLINA HEALTH SYSTEM

December 16, 1998

Dr. Mardi Horowitz
Department of Psychiatry
513 Parnassus Avenue
San Francisco, CA 94122-2722

Dear Dr. Horowitz:

I am a MSW student at Augsburg College and Director of Social Services at Mercy/Unity Hospital in Minneapolis, Minnesota. As part of my MSW program, I am undertaking a small research study that will, in part, examine the impact of hospital critical incidents on employees.

My research will be conducted at Mercy/Unity Hospital and data will be used to evaluate effectiveness of our Critical Incident Stress Debriefing program. Information gathered will, I hope, be used to improve the hospital's acknowledgment of, and response to, staff stress.

The literature review I conducted revealed the IES used in numerous studies involving stress measurement. In addition, I found reference to the IES in Tests and Measures for Clinical Practice.

I would like your permission to use the IES and would appreciate information pertinent to scoring of the tool. Your responses and assistance would be greatly appreciated.

See Psychosom. Med '79 paper
exit

OK, MHorowitz

Respectfully,

Brenda Verbick

Brenda Verbick, Director
Social Service Department
Mercy/Unity Hospital
4050 Coon Rapids Blvd.
Coon Rapids MN 55433

Fax: (612) 422-6038

Enclosure: Self-addressed, stamped envelope

Appendix G: Allina IRB

Institutional Review Board
Administrative Office
Internal Zip PEI-43400
710 East 24th Street, Suite 400
Minneapolis, MN 55404-3810
612-336-5524
Fax 612-336-5544

ALLINA
HEALTH SYSTEM

January 7, 1999

Brenda S. Verbick
Mercy Hospital, Social Service
4050 Coon Rapids Blvd.
Coon Rapids, MN 55433

Re: 12-98-70 Critical Incident Stress: A study of its impact on acute hospital personnel and the effectiveness of a Critical Incident Stress Debriefing model of intervention on reducing stress reactions.

Dear Ms. Verbick:

Thank you for submitting the new study application dated 12-7-98, dear Colleague letter, notice of consent, and related information. This study was approved via the expedited approval process for a period of 12 months. You may now start to screen and enroll participants into the above referenced study.

The entire Board will be apprised of the Expedited Approval at the next regularly scheduled meeting of the Mercy/Unity Hospitals Institutional Review Board.

Please continue to inform the IRB immediately of all changes in the protocol or consent form, early removal of a participant for any reason, and if any study participants experience serious adverse events, or events which occur at a frequency or intensity greater than that described in the consent form.

Please also note that any advertising or recruitment materials must be submitted to the IRB and approved prior to use.

In any further correspondence with the IRB please refer to the IRB file number and the Board which approved this study.

If you have any questions or concerns, please do not hesitate to contact the IRB Office at (612) 336-5524.

Sincerely,

Patty vonHelmst-Davis, LPN, CCRC
Institutional Review Board Coordinator

Appendix H: Augsburg IRB

MEMO

February 5, 1999

TO: Ms. Brenda Verbick

FROM: Dr. Lucie Ferrell, IRB Chair

RE: Your Institutional Review Board Application

Thank you for your response to the IRB outcome of review conditions. You have resolved the issues identified, and there are two simple points that you need to address:

1) On your consent form you need to state that your thesis is in social work. This is required and may also help you gain consent because of that credential you hold.
2) In the "confidentiality" section of the consent form you state that records will be private. You should state that they will be kept confidential, the more stringent legal and ethical standard to which the professions are held.

Once you make these two changes, you may begin your research: IRB approval number 99-06-3. Please use this number on all official forms and correspondence relative to your study.

Your research should, indeed, prove very valuable, and we wish you every success in your work.

LF:lmn

c: Dr. Maria Dinis